1   IN THE UNITED STATES DISTRICT COURT
        FOR THE EASTERN DISTRICT OF TEXAS
2   MARSHALL DIVISION

3
PACKET INTELLIGENCE LLC   )(CIVIL DOCKET NO.
4   )(
)(2:16-CV-230-JRG
5   )(
)(
6 VS.   )(MARSHALL, TEXAS
)(
7   )(
NETSCOUT SYSTEMS, INC.   )(
8 TEKTRONIX COMMUNICATIONS,   )(OCTOBER 10, 2017
AND TEKTRONIX TEXAS LLC   )(12:30 P.M.
9

10   TRANSCRIPT OF JURY TRIAL

11   BEFORE THE HONORABLE JUDGE RODNEY GILSTRAP

12   UNITED STATES DISTRICT JUDGE

13 APPEARANCES:

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25 (Proceedings recorded by mechanical stenography,
   transcript produced on CAT system.)

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 1                     P R O C E E D I N G S

 2                     (Jury out.)

 3                     COURT SECURITY OFFICER:  All rise.

 4                     THE COURT:  Be seated, please.

 5                     Plaintiff, are you prepared to call your

 6   next witness?

 7                     MR. DAVIS:  We are, Your Honor.

 8                     THE COURT:  All right.  Let's bring in

 9   the jury, Mr. Nance.

10                     COURT SECURITY OFFICER:  All rise for the

11   jury.

12                     (Jury in.)

13                     THE COURT:  Welcome back from lunch,

14   ladies and gentlemen.  Please have a seat.

15                     Plaintiff, call your next witness.

16                     MR. DAVIS:  Thank you, Your Honor.

17   Plaintiff calls Mr. Joseph Maixner to the stand.

18                     THE COURT:  If you'll come forward, sir.

19   You've previously been sworn, correct?

20                     THE WITNESS:  Yes, I have.

21                     THE COURT:  All right.  Please have a

22   seat.

23                     And if you will, pull that microphone

24   down just a little bit.

25                     THE WITNESS:  Is that good, sir?
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 1                    THE COURT:  That's good.

 2                    Counsel, you may proceed.

 3      JOSEPH MAIXNER, PLAINTIFF'S WITNESS, PREVIOUSLY SWORN

 4                      DIRECT EXAMINATION

 5  BY MR. HARTSELL:

 6      Q.    Mr. Maixner, could you please introduce

 7  yourself to the jury?

 8      A.    Yes, certainly.  Hello everyone.  Good

 9  afternoon.  My name is Joseph Maixner.  I'm from Santa

10  Cruz, California up in the San Francisco, San Jose,

11  Silicon Valley area.

12      Q.    Mr. Maixner, why are you here today?

13      A.    Well, I'm one of the inventors that are listed

14  on the various patents, or some of the patents that are

15  being considered here today.  And I'm also one of the

16  people that was implementing the technology at the time

17  when -- when that was all coming to be.  And so I'm --

18  I'm looking forward to being able to -- to being able to

19  share with you what was going on and how that technology

20  all came to be.

21                    THE COURT:  Mr. Maixner, let me ask you

22  just to pull the microphone a little closer or scoot up

23  a little bit.  I want to make sure everybody in the room

24  hears you.

25                    THE WITNESS:  Certainly.  How's that?
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 1   THE COURT: All right.   Let's continue.

 2   Q.   (By Mr. Hartsell)   Mr. Maixner, are you

 3   married?

 4   A.   Yes, I am.   I've been married for almost 20

 5   years now.   My wife Polly is a stay-at-home mom.

 6   Q.   Do you have any kids?

 7   A.   Yes, I have two daughters.   I have -- my

 8   oldest daughter is an 18 year old just starting a local

 9   junior college, and my youngest daughter is 16, and

10   she's a junior in high school.

11   Q.   Mr. Maixner, what is your current job?

12   A.   I'm currently the principal architect at A10

13   Networks.

14   Q.   And could you tell the jury what it means to

15   be a principal architect?

16   A.   As a principal architect I'm responsible for

17   helping to find areas of new technology, you know, for

18   our company.   And also to, you know, define how our

19   current technology can be better.   I think that's an

20   easy way to put it.

21   I'm -- I guess, you know, if think about it,

22   an architect is somebody you normally thing of going --

23   somebody you go to to -- you know, if you want a house

24   built or if you want a house remodeled or something like

25   that.   If you go to the architect and -- the architect

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 1  is really there to try to, you know, help understand

 2  what's really needed and how it can best work for you,

 3  and how to make it real -- into reality.  And that's

 4  really what I kind of do for my company.

 5       Q.   So is it fair to say that you're used to

 6  developing technology?

 7       A.   Oh, yes.  I've been developing technology

 8  anywhere from, you know, for the last number of years,

 9  but anywhere from, you know, idea phase to production.

10       Q.   And are you familiar with Packet Intelligence

11  LLC?

12       A.   Yes, I am.  Packet Intelligence is the current

13  owners of patents that I and some of my former

14  co-workers were listed on.

15       Q.   Do you have any ownership interest in Packet

16  Intelligence?

17       A.   No, no, I don't.

18       Q.   Do you have any stake in the outcome of this

19  litigation?

20       A.   No, none at all.  I don't have a horse in this

21  race.

22       Q.   Could you provide the jury with a brief

23  overview of your educational background?

24       A.   Sure.  Some time ago, long time -- longer than

25  I'd like to think, when I got out of high school, I -- I
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1 went to Southern California where I got my Bachelor's

2 degree in electronics engineering from Northrop

3 University in 1981.

4   I moved from there up to Northern California

5 where I went to Stanford and I got my Master's degree in

6 electrical engineering in 1983.

7   Q.   And could you briefly describe for the jury

8 your professional career to date?

9   A.   Yes. Over the last 35-some-odd years, I

10 worked for about six to seven companies, all in

11 technology development, anywhere from soft -- being a

12 software developer to chief engineer for large projects

13 and programs to -- to technology architecture. One of

14 those companies was a consultancy of my own.

15   Q.   And are you familiar with a company called

16 Technically Elite, sometimes referred to as Apptitude?

17   A.   Yes, I am. That's one of the companies that I

18 work with, eventually worked for. You know, and -- and

19 then I started as a consultant for them.

20   Q.   And do you recall when you started working at

21 Technically Elite/Apptitude?

22   A.   Yes. That was -- that was back in 1997. I'd

23 just come off of taking a month of doing something

24 totally different, helping my brother set up his -- his

25 first office after he'd gotten out of dental school, and

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 1  then I came back in September of 19 -- 1997, you know,

 2  and started my work -- working relationship with

 3  Technically Elite.

 4       Q.    When you started at Technically Elite, what

 5  were you working on?

 6       A.    Well, originally, as I said, I started as a --

 7  as a consultant to the company.  At that time, the

 8  company had a number of issues with their products at

 9  the time.  Those were network monitoring probes.  And

10  they needed some extra help to, you know, kind of, oh,

11  get through the excessive numbers of issues and bugs

12  that they had at the time.

13       Q.    Mr. Maixner, why do people in companies use

14  monitors to monitor data on their networks?

15       A.    Well, if -- if you think of it, there's -- you

16  know, I've always said there's -- if you can't see it

17  you can't do anything about it.  Networks are kind of a

18  very -- almost like a black box, you know, there are

19  things that connect from one computer to another,

20  amongst many computers.

21            Go ahead.

22       Q.    If you're done.

23       A.    Well, I'm just kind of trying to stage my

24  thoughts here.  But what happens is, is when they --

25  people -- people need to see what's going on in their
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1 networks.   Networks are really kind of notoriously hard

2 to see.   You know, if you think about it, if you're --

3 from your own homes, as you connect off to the Internet,

4 you don't really know what's going on in that network.

5   And so it's the same thing with companies and

6 corporations and large Internet providers.   They all

7 have these networks, and in order to see what's going on

8 in them, then you need to have some various devices to

9 monitor that and help to see what's there.

10   THE COURT: Let me -- let me stop just a

11 minute.

12   Mr. Maixner, you're just a little more

13 softly spoken than Mr. Dietz was.   Let's pull the

14 microphone a little closer to you.

15   THE WITNESS: Sure.

16   THE COURT: You might want to help him,

17 Mr. Nance, because he adjusts it and then he turns his

18 head the other way and we don't catch his -- his voice.

19   No, that's not the microphone I'm

20 concerned about.   It's that one.   All right.   Let's see

21 if that doesn't work.   I just want to make sure everyone

22 hears you.

23   THE WITNESS: Sure.

24   THE COURT: Okay.   Let's continue,

25 Counsel.

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 1        Q.    (By Mr. Hartsell)   Mr. Maixner, you said when

 2 you started at Technically Elite, you were debugging

 3 software.   Did you come to do anything else at

 4 Technically Elite?

 5        A.    Well, yes, after the first -- oh, I can hear

 6 that now.   After the first three or four months where I

 7 was basically, you know, helping -- helping the team fix

 8 bugs and -- and overcome issues, I -- I transitioned

 9 then into working on development of new technology for

10 the company, in particular new technology and -- that

11 would help it overcome some of the -- you know, the

12 goals at the time, which would be to primarily increase

13 performance of the product and to give it an extended

14 range of capabilities.

15        Q.    Now, when you started these development

16 efforts, were there any specific performance short --

17 shortcomings that you were concerned about?

18        A.    Oh, yes.   At that time, the world was kind of

19 transitioning.   We were coming from one level of

20 technology called Ethernet to another technology called

21 fast Ethernet.   Networks were getting basically like a

22 hundred times faster.   And, you know, all the products

23 in the industry, Technically -- Technically Elite

24 included were only able to keep up with that original

25 technology.
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1   And as a result, when we were trying to --

2 trying to monitor these faster networks, we were missing

3 lots and lots of the traffic. So that was one of the

4 big concerns.

5   Q.   Mr. Dietz -- or, I'm sorry, Mr. Maixner, why

6 is it a problem if you are missing some of the traffic

7 or only see a fraction of traffic on a network?

8   A.   Well, I guess if you think about it, you know,

9 when it comes -- if you were trying to observe and

10 monitor a network, and if you think of -- if you think

11 about it and it'd be like in this situation where you've

12 got a slow monitor and a fast network, it's almost like

13 connecting a garden hose into like a sewer main. You

14 know, all you're seeing -- if you're trying to assess

15 and understand what's going on in that overall flow of

16 the sewer main, right, and you plug a garden hose into

17 it, you're only getting a tap off of it, a small

18 percentage of what's going on there.

19   And if you're trying to understand the overall

20 function of that -- that pipe, you're not going to --

21 you're not going to know it. You're only going to be

22 getting a sample.

23   It's the same way with the computer networks

24 at the time. The monitors were slow. They were only

25 seeing a part of it, and as a result, they were missing

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 1  most of what's going on, so they weren't giving a very

 2  accurate representation of all that was going on on the

 3  net -- on the newer networks.

 4       Q.   So aside from these increases in the volume of

 5  network traffic, were there any other concerns that you

 6  and your team were concerned about?

 7       A.   Yes.  One of the other things that was

 8  happening back in the day, as they say, was that these

 9  things called protocols and the various types of

10  applications that were using them were getting much more

11  complicated.  And there were a lot more of the

12  complicated ones showing up.

13            They were also using a lot of that new

14  bandwidth that was in these newer networks.  And so it

15  became more difficult to, you know, understand what all

16  those -- what all the things were in the network, as

17  well as I said to miss -- since you're missing a lot of

18  stuff, then you're also not giving a very thorough

19  representation of what's going on.

20       Q.   Were you able to overcome the -- the

21  shortcomings in terms of not being able to see all the

22  packets?

23       A.   Yes.  Yes, we were.

24       Q.   So once you were able to see all the packets,

25  did that present any new opportunities or challenges?
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1   A.   It presented definitely new opportunities,

2   and, you know, what are opportunities for one man are

3   challenges for the other. The company at the time says,

4   hey, look at all this fun stuff we can do, and then the

5   development team, myself included, we found those as

6   challenges. We had to figure them out.

7   Q.   Now, I believe earlier, you mentioned the term

8   -- the word "application." Can you explain to the jury

9   what an application is?

10   A.   Sure. An application is, you know, a program

11   that usually is running on one of your computers. It's

12   talking to another program on another computer. You can

13   think of it like your web browser is a program, and it's

14   talking to web servers. You can also think of it --

15   other applications -- even sometimes within the web

16   browser itself, you could have a Facebook application,

17   right, as we all go to Facebook. There's all these

18   types of applications like email, voice chat,

19   videoconferencing are all examples of the type of

20   applications that a lot of people use these days.

21   Q.   Now, another word that we've heard today is

22   the word "protocol." Can you explain to the jury what a

23   protocol is?

24   A.   Sure. I've always looked at protocols as --

25   and thought of protocols as, yeah, certainly the basis

1 of how computers communicate. So if you think about how

2 people communicate, we all have to have a common

3 language to communicate, right? So, you know, be it

4 English or French or whatever.

5   For computers to communicate, they need a

6 common language, as well, and that common language is

7 what we call protocols. These are just standard

8 definitions that everybody agrees to. And as the

9 computers have that common knowledge and -- of what the

10 messages are they're going to send back and forth, they

11 can now actively be -- they can constructively

12 communicate.

13   So protocols are just standard definitions of

14 messages, formats, and all that sort of stuff.

15   Q.   Now, you mentioned that the Internet was

16 growing and there were more complicated protocols and

17 traffic were being seen. Could you provide the jury an

18 example?

19   A.   Yeah. Let's see, a good one is what I -- is

20 if you think about -- a typical common thing you use

21 today is Facebook video chat or various instant

22 messengers like Skype, for instance, who will let you

23 have video calls back and forth. Back in the day back

24 then, we were looking at this protocol that involved

25 videoconferencing, right? And this one was particularly

1 challenging because it involved a number of different

2 communication flows.

3   So, you know, it started off with one

4 connection. That one would negotiate and then set up a

5 second one. The second one would kind of involve

6 messages that allowed the two computers to determine

7 what type of audio and video they're going to use.

8   Like, for instance, is it high def audio or

9 high def video versus, you know -- you know, 720 video.

10 Those are kind of more contemporary terms for different

11 things back then, but that would then spawn off anywhere

12 from four to eight other types of connections that would

13 -- they would actually transfer all the audio and video.

14   Q.   Now, were the probes in the 1997 time frame

15 able to accurately classify the traffic that was coming

16 from these more complicated applications and protocols?

17   A.   No, not in the 1998 time frame.

18   Q.   Did you and your co-inventors come up with a

19 way to deal with these more complicated types of

20 traffic?

21   A.   Yes. Yes, we did. We looked at these -- you

22 know, two connections and four -- or to eight

23 datastreams all apart -- all of which made up a call,

24 and we were able to abstract that as conversational

25 flow. It's a combination of multiple flows -- in this

 1 case a couple of TCP connections -- and then multiple

 2 datastreams with audio and video going back. We were

 3 able to abstract that as a single construct that had

 4 interrelated component -- you know, if you will, flow

 5 components.

 6   Q.   And what are the benefits of this new approach

 7 that you and your co-inventors came up with?

 8   A.   Well, the benefit was definitely, we were able

 9 to start seeing -- when I say seeing, we were able to

10 start classifying a whole bunch -- a lot more traffic,

11 not just with this audio -- this videoconferencing

12 protocol but a number of others that were equally, you

13 know, complicated or -- not as complicated as that one,

14 I have to say, but there were a bunch of others.

15   So, you know, as we started enhancing our --

16 our technology to understand all those other ones, we

17 were able to start seeing a much broader range of

18 traffic. We were able to classify what it all was, as

19 opposed to it all being simply unknown.

20   Q.   And when you're able to classify all this new

21 traffic, what are the benefits of that?

22   A.   Well, as I said, one of the benefits is being

23 able to -- well, I guess one of the -- one of the things

24 that you get when you -- when you have such a

25 significant amount of new visibility in something, I've

1 seen this all through my career, that the first time

2 people all of a sudden get a tremendous boost in the

3 visibility in their network, what they find are two

4 things.

5   One is how much stuff is going on in their

6 private networks that they didn't -- that they don't

7 like. There's a whole bunch of stuff happening that

8 they're finding out that, gosh, that's not supposed to

9 be there, who's doing that, this isn't good.

10   Second is a whole bunch of things that are

11 unknown, right. So you see that if you go from a 10 to

12 a hundred speed network, all of a sudden you find that

13 there's just massive amounts of that additional 90

14 percent that you weren't ever able to see. First you

15 get over the performance problem, now you can see it,

16 and then now you find there's such a tremendous amount

17 is unknown. That's the second piece of the puzzle.

18   And so with these techniques, we were able to

19 figure out and determine what a lot of those traffic

20 types were that were in commonplace networks, like that

21 videoconferencing one, other ones as well, and really

22 have a now expanded ability to classify and help our

23 customers understand, you know, what the -- what was all

24 going on on their network and what it was and what it

25 wasn't.

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 1        Q.    Can the approach that you and your
 2  co-inventors -- the approach that you and your
 3  co-inventors developed, can it be applied to other
 4  areas -- other networking functions?
 5        A.    Yes, and that was always part of the -- the
 6  mission, you know, back then.
 7             The -- the visibility that you get when you
 8  start seeing all this new stuff really starts giving the
 9  ability to benefit and compliment other network things
10  that happen in typical computer networks.
11             A good example could be quality of service.  A
12  lot of computer operators and IT departments would like
13  to give some applications in the network preferential
14  benefit over others.  Sometimes they may do that by
15  departments.  Sometimes they may do that by application.
16  So if you now know what these applications are, then you
17  have a greater ability to control and manage your
18  network.
19             Another one is potentially firewalls and
20  security, application security.  Now that you know what
21  all this new traffic is, it's not just all one big
22  bucket called unknown.  Now it's like this and that and
23  that and that.  You can now more granularly control, you
24  know, what is permitted in and out of your various
25  networks.  Because firewall is something that, you know,
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1 tends to block stuff or admit stuff. And so having a

2 more granular ability to do that is a big benefit for

3 network operators.

4   Q.   Now, earlier today, we've heard testimony

5 about the RMON Working Group of the IETF. Were you ever

6 a member of the RMON Working Group?

7   A.   No, no, I was never a member of the RMON

8 Working Group. And to be honest, I was never a member

9 or involved with any of the IETF groups.

10   Q.   How long did it take you and your co-inventors

11 to come up with and develop the approach that you

12 described today?

13   A.   That -- that started in 1998. We worked on

14 that pretty hard. I would have to say that was a --

15 kind of a little -- kind of -- I'm not sure what my

16 facial features look like because it was a lot of work

17 back then. It was a crash class to get through that.

18 We got through that mostly through 1998 and through '99.

19   A majority of the foundations for that

20 technology, you know, we had gotten through by the -- by

21 the time the provisional patent was filed. We continued

22 to enhance and augment and extend that technology, you

23 know, for a number of years after.

24   Q.   Is it fair to say that you and your

25 co-inventors developed your technique from scratch?

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 1        A.    Oh, yes.   We developed the -- we developed

 2   that technology, you know, literally line-by-line,

 3   handwritten, every line of code from the ground up.

 4             We -- we -- yes.

 5        Q.    At any point in your development efforts, did

 6   Mr. Dietz ever come and say, hey, I just found this

 7   really cool thing from an RMON meeting that I think that

 8   we should implement in this -- in this -- these

 9   development efforts?

10        A.    No, no.   Nothing like that.   That's not

11   possible.

12        Q.    Mr. Maixner, were you in the courtroom this

13   morning when NetScout's Counsel gave its opening

14   statement?

15        A.    Yes, I was.

16        Q.    Did you hear NetScout's Counsel say that

17   NetScout believes that you and your co-inventors

18   essentially took credit for the work of the RMON Working

19   Group?

20        A.    Yes, yes, I did.

21        Q.    Is that a fair characterization?

22        A.    No, no, that's --

23        Q.    Could you explain to the jury why?

24        A.    Yes.   As I see RMON, RMON is a collection of

25   tables.   It's essentially a database.   It's meant to
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 1  store information, retain it, you know, for anywhere
 2  from -- you know, for days, weeks, months, years.  It's
 3  not really -- RMON itself is just a definition of how
 4  data can be stored.  It doesn't specify or tell you
 5  anything about how data gets into it -- into it or out
 6  of it.
 7          So it's a database.  I mean, if you go to
 8  Google and you Google RMON, it will tell you that RMON
 9  is the remote monitoring MIB, M-I-B.  If you Google MIB,
10  it says this is a database, as another example.
11          The technology involved with the invention is
12  all about processing packets, right.  I mean, processing
13  packets in a real-time, as fast as you can, you're there
14  to benefit, you know, network monitoring applications,
15  firewalls, quality of service things, load balancers, I
16  mean, there's a whole range of other networking-type
17  things you can do.
18          Frankly, to think that somebody could copy,
19  you know, could -- could establish a packet processing,
20  high-speed real-time technology from a -- from a -- from
21  something that's just so different, which is as a
22  database, is to me just really, frankly, ridiculous and,
23  you know, it's just unbelievable.
24      Q.    Thank you, Mr. Maixner.
25              MR. HARTSELL:  I have no further
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1 questions.   Pass the witness.

2   THE COURT: Cross-examination.

3   CROSS-EXAMINATION

4 BY MR. LYONS:

5   Q.   Good afternoon.

6   A.   Good afternoon.

7   Q.   Now, you were hired by Technically Elite in

8 1997 as the very first technical consultant; is that

9 true?

10   A.   I -- I have no knowledge if they had any other

11 technical consultants prior to that.

12   Q.   But you were the only consultant at that time?

13   A.   I don't know that -- I -- I -- to be honest, I

14 don't know -- I wasn't aware of the hiring status for

15 everybody.   So I didn't know who was a permanent

16 employee and who -- what other employees in the -- or

17 staff were in the company, whether they were consultants

18 or not.

19   Q.   And when they hired you, you had prior to that

20 been working for a company called Bay Networks; is that

21 right?

22   A.   Yes, that's correct.

23   Q.   And in your work with Bay Networks you became

24 very familiar with RMON1 and RMON2; is that right?

25   A.   Very.   You know, I had become, you know,

1 pretty familiar. I mean, I certainly knew what RMON1

2 was. That had been around for ages. RMON2 was still

3 fairly -- you know, fairly new. But yes, I'd -- you

4 know, I had -- I had a couple of projects at Bay

5 Networks that involved some RMON and RMON2 probes,

6 but -- well, not probes. Those were what they call

7 switches and hubs, network switches and hubs.

8 But there were pieces of RMON that were in them. It

9 wasn't a full RMON implementation.

10   Q.   Now, your understanding that you were hired as

11 a consultant was because of your experience with RMON

12 because that was at the core of what Technically Elite

13 was doing, right?

14   A.   Well, it certainly couldn't hurt. I mean,

15 it -- I mean, the fact is I had some exposure to RMON,

16 RMON2, and then SNMP which is what they were built upon.

17 So I had exposure and familiarity with those, and they

18 certainly were seeking -- you know, they had -- they

19 had -- that was part and parcel of their products.

20   Q.   It was, in fact, the core of the Technically

21 Elite product, right?

22   A.   That was what their product was. They were

23 RMON and RMON2 probes.

24   Q.   Now, you testified you didn't -- you weren't a

25 member of the RMON committee.

```
 1        A.    Right.

 2        Q.    But you were very familiar with their

 3   standards, right?

 4        A.    Well, they -- these were public documents

 5   from -- you know, so to the extent that -- yeah, so I

 6   was very -- I was familiar with the various RFCs -- I

 7   forget the numbers, and there's like two or three of

 8   them, but, yes.

 9        Q.    It was your job to implement these standards

10   so you knew them very well, correct?

11        A.    I was familiar with them.  When I joined

12   Technically Elite, I was familiar with some parts of

13   them.  I knew what the other parts were, but not to a

14   large degree.  And when I started helping them -- fixing

15   the issues and debugging stuff, I would have to make

16   reference to the RMON specifications, you know, to help

17   understand and -- and fix the implementation that they

18   had.

19        Q.    And that was a big part of the role they hired

20   you to fulfill was to help improve their RMON

21   applications, right?

22        A.    No.  Well, they hired me because they had an

23   excess amount of issues and bugs with their RMON probes,

24   and they needed -- they needed a consultant to come in

25   and help with that, you know, excess overage, right,
```

 1 help knock it down quicker. But that was not what -- I

 2 was not there to develop -- I was not hired to develop

 3 anything.

 4   Q.   Now, part of your job was to write code that

 5 would actually meet the RMON standards, right?

 6   A.   No. For the RMON code that they had

 7 implemented at the time, that was their own home grown

 8 implementation of an RMON compatible monitoring agent.

 9 I was not there to develop new code for it. I was there

10 to fix existing code. That was in the first three

11 months.

12   Q.   Well, you actually were drafting

13 TrackSessions' RMON code while you were there, right?

14   A.   In the -- in the RMON code, I was only fixing

15 bugs. And to be honest, most of those bugs were in

16 various table look-ups, algorithms.

17   MR. LYONS: I would like to make a binder

18 available to the witness. Your Honor, may I -- may I

19 approach?

20   THE COURT: You may approach the witness.

21 If you'll hand that to the Court Security Officer, he'll

22 deliver it to the witness.

23   And, Mr. McAteer, readjust his microphone

24 a little bit while you're there at the podium. The

25 witness has scooted away from the mic and --

```
 1                    THE WITNESS:  I can scoot up.

 2                    THE COURT:   -- I'm just having a hard

 3  time hearing him.  And I'm about six feet away.  I can

 4  imagine people in the back are having a hard time

 5  hearing him.

 6                    Okay.  Let's continue.

 7                    MR. LYONS:  Your Honor, you -- I have a

 8  binder for you, as well, Your Honor, if I --

 9                    THE COURT:  All right.  Let's pass out

10  all the binders you want to pass out.

11                    Opposing Counsel has this, as well?

12                    MR. LYONS:  Yes, Your Honor.

13                    THE COURT:  All right.  Let's continue.

14      Q.   (By Mr. Lyons)  I'd like to refer you to the

15  last tab in your binder.  Do you recognize that

16  document?

17      A.   This is Maixner Dep Ex-212?

18      Q.   That's correct.  Do you recognize that

19  document?

20      A.   I'm getting there.

21      Q.   Yeah, take your time.

22      A.   Let's see, which one is this?  This is the

23  PRG.  Ah, yes.

24      Q.   And this is a document that you're familiar

25  with because you created it; is that right?
```

1   A.   Yes, I -- yeah, yeah.   So in this document,

2   you know, there's a revision history.   And I was -- my

3   initials, JRM, are an indicator that I -- I created this

4   file.

5   Q.   And this was something you were working on

6   from December '97 to April of 1998, right?

7   A.   This -- this file lived on much longer, but,

8   yes, certainly.

9   Q.   And I'm just going to ask you to refer to a

10 page that bears -- and there's a long number at the

11 bottom, but the last three digits are 312.

12   A.   Okay.

13   Q.   And if you just look at that page and some of

14 the following pages.   And the question is: Does this

15 refresh your recollection about whether you were working

16 on TrackSessions' RMON's code when you were working at

17 Technically Elite in the '97/'98 time frame?

18   A.   Yeah.   This function is -- this function is

19 one that has in its name TrackSessions.   This function

20 is actually disabled.   It's -- it's compiled out.   It

21 was never implemented.   I remember at the time, it was

22 kind of a placeholder for what we thought we wanted to

23 do as we went forward with this file.   This -- this file

24 is one that is trying to understand and pull the pieces

25 apart.   It's trying to decode a certain type of packet

```
 1  format.  And so -- for a certain type of protocol.

 2  And so the -- the -- the basic element of what -- the

 3  important element of what we had established at this

 4  point was the basic decoding framework.  The -- all the

 5  TrackSessions stuff that you see here was really kind of

 6  meant to be -- well, how are we going to figure out how

 7  to deal with stateful matters further on for this.

 8                  THE COURT:   Counsel, approach the bench,

 9  please.

10                  (Bench conference.)

11                  THE COURT:   If you'll ask specific

12  questions, I'll make sure he answers those questions.

13  When you're asking vague questions, he's wandering all

14  over the countryside.

15                  MR. LYONS:   Okay.

16                  THE COURT:   And this is not helping

17  anybody.  He's going to need to be responsive, but he's

18  going to have to have a specific targeted question.

19                  Let's see if we can't -- can straighten

20  up this examination a little bit.

21                  MR. LYONS:   Thank you, Your Honor.

22                  THE COURT:   All right.

23                  (Bench conference concluded.)

24                  THE COURT:   Let's continue.

25      Q.   (By Mr. Lyons)  Mr. Maixner, so this does
```

 1 confirm -- refresh your recollection that you were

 2 indeed working on TrackSessions from RMON in the late

 3 '97, early '98 time frame at Technically Elite, correct?

 4   A.   Well, this confirms that we had something that

 5 we put a title called TrackSessions on. But all that we

 6 were implementing at that point was the core decoding

 7 and parsing capabilities and that -- all about how we

 8 were going to try to keep track of flows and

 9 conversational flows and all those sort of things was

10 yet to come.

11   MR. LYONS: Objection, nonresponsive,

12 Your Honor.

13   THE COURT: Mr. Maixner, he asked you if

14 this refreshed your recollection that you were working

15 on TrackSessions at RMON in late '97, early '98. And

16 the answer would be either yes or no. Then if Mr.

17 Hartsell wants to go into why the term "TrackSessions"

18 is in there and what it doesn't mean and what it doesn't

19 indicate, he can do that on redirect. So try to limit

20 your answers to the questions asked, okay?

21   THE WITNESS: Yes, sir.

22   THE COURT: All right. Let's continue.

23   Q.   (By Mr. Lyons) Now, you -- you referred to

24 some protocols that you became aware of in this time

25 frame that were the focus of your work; is that right?

```
 1        A.    Yes.   Yeah.   Yes.

 2        Q.    And you referred to a videoconferencing

 3 protocol; is that correct?

 4        A.    Yes, that's correct.

 5        Q.    What protocol were you talking about?   What's

 6 the name of it?

 7        A.    That -- the name of that protocol is -- it's

 8 actually a suite of protocols, but it's called H323.

 9        Q.    And did you discuss that protocol in your

10 patent?

11        A.    I don't recall specifically.

12        Q.    Did you talk about a protocol called RPC in

13 your patent?

14        A.    I believe in the patent, a protocol called

15 SunRPC was there.

16        Q.    And was that one of the protocols that you

17 identified as having this problem where you would have

18 too many connection flows involved with a single

19 activity; is that right?

20        A.    It's -- it's an example of a protocol that

21 could -- that involves conversational flows.

22        Q.    Well, not only involves conversational flows,

23 it has the disjointed flow problem where you have two

24 connection flows for one activity, right?

25        A.    Not -- I don't -- I don't understand what you
```

1 mean by disjointed flow problem.

2   Q.   Have you ever heard the term "disjointed

3 flow"?

4   A.   I've heard the term, but to be honest, that

5 was so many years back, I -- I don't recall.

6   Q.   Is that a term that's used in your patents?

7   A.   I don't recall. It's not one that I've

8 used -- it's not -- it's not one that I've -- I recall

9 using during my tenure at Technically Elite and

10 Apptitude. And haven't really used that term ever

11 since. I don't -- I'm not -- it doesn't -- it doesn't

12 register for me.

13   Q.   But the term "conversational flows," is

14 that -- is that a term that you used?

15   A.   Yes.

16   Q.   And you recognize that your -- your invention

17 was supposed to address problems to create

18 conversational flows in protocols such as RPC; is that

19 right?

20   A.   Yes. I mean, RPC would have been one -- one

21 of the protocols that could have, by the virtue of its

22 mechanisms, could have -- you know, could have multiple

23 flows, connection flows, if you will, or datagram flows.

24 That could be related together as a whole.

25   Q.   And the TrackSessions standard from RMON was

 1 also supposed to address challenges in -- in tracking a

 2 flow from the RPC protocol, right?

 3   A.   I don't -- I don't recall. I don't -- I'm not

 4 familiar with the TrackSessions's segment of the RMON

 5 spec.

 6   Q.   Although you did work with it, as we -- you

 7 just discussed earlier, correct?

 8   A.   I remember there was a section on it. You

 9 know, out of probably a couple -- maybe a hundred or 200

10 pages there was like a page of what I thought was, you

11 know, basically a high-level wish list.

12   Q.   What was -- what was the problem in using RPC

13 that resulted in it being challenging, having multiple

14 connection flows with a single activity? Why did that

15 happen?

16   A.   So your question -- could you repeat your

17 question, please?

18   Q.   Well, the -- the -- maybe I'll rephrase.

19   So for the RPC protocol, it would establish

20 one connection, and then it would dynamically reassign

21 the activity to -- to another port; is that right?

22   A.   Yes. If I recall correctly, the SunRPC

23 protocol would establish one connection, an initial

24 connection. On that connection it would send --

25 potentially send -- it would either use data on that

 1 connection or it would try to use a subprotocol, if you

 2 will, called port mapper.

 3   If it used port mapper on that connection, it

 4 would then send a message back and forth trying to

 5 allocate another port that it could use for a different

 6 protocol exchange. So it's kind of two -- and then you

 7 would end up with that -- with any -- with that

 8 connection on the sep -- separate port being potentially

 9 a different protocol.

10   Q.   And this is the -- the -- the source of the

11 problem that your patent discusses when it says a single

12 activity can result with multiple connections, right?

13   A.   Yes, yes. I mean, that was part of the role

14 in the conversational flow.

15   Q.   And the way that your patent proposes to solve

16 that problem is to monitor that port-mapper connection

17 and remember the newly assigned port; is that right?

18   A.   That would have been -- yes, that -- for --

19 for that SunRPC protocol, that would have been a -- a

20 method, right.

21   Q.   And then you remember that port by saving the

22 port number as part of a second key, correct?

23   A.   Yes, we would save that port number along with

24 other information to help distinguish accurately that --

25 you know, that end point where the next connection was

 1 supposed to establish.

 2   Q.   So by remembering that port, by saving it in a

 3 second key, you could then track that second connection,

 4 correct?

 5   A.   Well, you need more information than the port.

 6 You'd need -- let's see, additionally you would need its

 7 address and potentially it's B-LAN.

 8   Q.   So you would need more information, but if you

 9 remember the port or that client was going to get the

10 service, then you could track that second connection,

11 right?

12   A.   For that one, I think that would be the case.

13   Q.   And that's, in fact, what you -- you show in

14 your patent as your invention, right?

15   A.   I'm not familiar with the SunRPC section and

16 the details of how it breaks down and tries to describe

17 how it's supposed to work for the SunRPC.

18   Q.   Well, it's shown --

19   MR. LYONS: Why don't we show the witness

20 Exhibit 475.   Why don't we blow up the cover portion of

21 the patent here?

22   Q.   (By Mr. Lyons)   Do you recognize this as one

23 of the patents you testified about earlier?

24   A.   Yes, yes, I do.

25   Q.   And you're listed as a named inventor of this

 1 patent; is that right?

 2   A.   Yes, I am.

 3   MR. LYONS: And why don't we go to Column

 4 7 of this patent.

 5   And why don't we look at Lines 45 to 55,

 6 if you could blow those up?

 7   Q.   (By Mr. Lyons) So does this refresh your

 8 recollection that Figure 2 of this patent is dealing

 9 with an exchange of -- and two connections that relates

10 to the SunRPC example?

11   A.   It doesn't mention SunRPC, but sadly, I'm a

12 slow reader. Let's see...

13   Q.   Why don't -- why don't we give you -- I'll

14 give you an easier one to look at.

15   MR. LYONS: Why don't we look at Column

16 32, Lines 38 through 46?

17   Q.   (By Mr. Lyons) Now, does this refresh your

18 recollection that Figure 2 is specifically showing how

19 your invention would work in the context of a SunRPC

20 protocol exchange?

21   A.   This -- well, now we started having to look at

22 Figure 2 and understand what these various blocks are, I

23 guess. I mean, this is making reference to, you know,

24 block diagrams that are showing some sort of, you know,

25 exchange of information, I believe, right.

 1   Q.   And if you can -- if you want to look in your

 2 binder at 475.   This is referring to Figure 2, and

 3 it's -- it says it's for the SunRPC example, right?

 4   You can look at the screen as well.   I just

 5 want to make sure you have whatever you want to refer

 6 to.

 7   A.   32?   Column 32?

 8   Q.   That's where the text is.   If you want to look

 9 at Figure 2 as well, if that -- that helps you.

10   A.   475.   Oh, I had 474 open.

11   There we are.

12   THE COURT: Let me remind the witness

13 that everything he says is written down in the

14 transcript.   So thinking out loud is not a real good

15 habit on the witness stand.

16   THE WITNESS: Sorry.

17   THE COURT: Okay.

18   THE WITNESS: My apologies.

19   Q.   (By Mr. Lyons)   So does that refresh your

20 recollection that Figure 2 is specifically showing how

21 your invention would work in the context of the SunRPC

22 exchange?

23   A.   Figure 2.   Are you sure this is -- let's see.

24 Figure 2.

25   Can you bring up Figure 2?   Wait a second, let

1 me see.

2   THE COURT: Counsel, why don't you take

3 Figure 2 and put it on the overhead.

4   MR. LYONS: Yeah, sure.

5   Can we have that put on the screen?

6   Q.   (By Mr. Lyons) Mr. Maixner, it's on the

7 screen in front of you if that helps.

8   A.   Oh, okay.

9   Yeah. This one is actually pretty hard and

10 almost impenetrable. I mean, it's certainly from a -- I

11 guess from a patent point of view and how people

12 represent, you know, the details in patents. If I look

13 at this, I'm still trying to figure out how we're

14 getting SunRPC out of it.

15   Q.   Well, we looked at the passage in the -- in

16 your patent where it refers to Figure 2 as showing an

17 exemplary embodiment relating to the SunRPC protocol,

18 right?

19   A.   Right. That's what it says. Let's see...

20   Q.   And in the RPC example, you have an exchange

21 of packets with something called a port mapper, right?

22   I'm sorry, I'm not sure that came through for

23 the record.

24   A.   No, I'm -- I'm still looking and trying to

25 correlate how these different pieces fit together. So

 1 | we've got the 206 plurality of packets, 206 to 209.

 2 | Q.   Well, in any RPC exchange, you first have an

 3 | exchange with the port mapper, correct?

 4 | A.   Yes. You issue an initial -- initially a

 5 | packet is -- is generated over UDP to the SunRPC port

 6 | map report, right.

 7 | Q.   And then you -- you -- in your invention, you

 8 | can monitor the reply and learn what the newly assigned

 9 | port is going to be, right?

10 | A.   That's correct.

11 | Q.   And then you can remember that port number and

12 | use that -- for example, Example 2 by creating a second

13 | key, and that's Key 2 in your figure, right?

14 | A.   Okay. I guess, yes.

15 | Q.   And then you can use that second key to track

16 | the second connection, right?

17 | A.   To help classify that second connection as the

18 | particular protocol that was requested to the port

19 | mapper.

20 | Q.   Now, if you go to Column 31, and if we take a

21 | look at Lines 30 to 35, you described this in your

22 | patent as a network monitor remembering the port number

23 | and able to associate the connections to create a

24 | conversation flow; is that right?

25 | A.   Yes. Yes, that's correct.

```
 1                    MR. LYONS:   Now, why don't we go to

 2  DX-58, and blow up the top here.

 3       Q.    (By Mr. Lyons)  Do you -- do you recognize

 4  this document?

 5       A.    Yes.   This is the RMON protocol ID spec.

 6       Q.    And so we -- we talked earlier about the work

 7  you did on the TrackSessions' portion of RMON at

 8  Technically Elite.  Is that something that would be

 9  contained in this document, the TrackSessions' material?

10       A.    I did not work on anything at Technically

11  Elite that we called TrackSessions.

12       Q.    Didn't we just -- didn't you just look at

13  software that you had written that includes that term?

14       A.    I -- I looked at a source file that had a

15  function name in it that had the -- had the name

16  TrackSessions in it.  That was just one file, one

17  function, and that was the name of that function.  And

18  it was never implemented.  So to be honest, I never

19  worked on any project or anything we called

20  TrackSessions.

21       Q.    Did you work with Mr. Koppenhaver?

22       A.    Yes.

23       Q.    Did he ever do any work on Exhibit 58 that

24  we're looking at right now?

25                    MR. HARTSELL:  Objection, foundation.
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 1                    THE COURT:  Sustained.

 2       Q.   (By Mr. Lyons)  Do you -- did you work

 3  together with Mr. Koppenhaver on developing software at

 4  Technically Elite?

 5       A.   Yes.  Mr. Koppenhaver was a -- was one of my

 6  -- was one of the colleagues -- co-workers at

 7  Technically Elite.  We didn't really work very much

 8  together, to be honest.  Most of -- almost all of Skip's

 9  work -- I'm sorry, Mr. Koppenhaver's work was focused on

10  a separate area from what I was working on.

11       Q.   So do you -- do you know if he -- part of what

12  he worked on was specifically directed to this exhibit

13  we're looking at in the TrackSessions' functionality?

14       A.   Technically, no, I don't know.

15       Q.   And you say technically you don't know.  What

16  does that mean?

17       A.   I -- I don't recall ever having any

18  conversations with Mr. Koppenhaver or any of my other

19  colleagues about -- you know, about something called

20  TrackSessions.

21       Q.   But do you know if you worked on

22  TrackSessions?

23                    MR. HARTSELL:  Objection, form,

24  foundation.

25                    THE COURT:  Sustained.  Let's move on.
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 1                    MR. LYONS:   All right.   Why don't we turn

 2  to Page -- in Exhibit 58, why don't we turn to the

 3  document bearing the Lines 179 is the last three digits.

 4  And if we can look at the -- if we can blow up the

 5  bottom two lines of that -- or three lines of that page,

 6  and also the top half of the -- or the first paragraph

 7  in the next page, please.

 8        Q.   (By Mr. Lyons)  And if you look at the second

 9  sentence of this paragraph -- first of all, this refers

10  to how TrackSessions addresses the SunRPC protocol; is

11  that right?

12        A.    This describes the SunRPC protocol.

13        Q.    Well -- and it describes how TrackSessions

14  would track a packet exchange in connection with the

15  SunRPC transaction, right?   That's what it says.

16        A.    It's describing the -- it's describing the

17  mechanism of the SunRPC protocol.

18        Q.    Well --

19        A.    And then -- oh, I see here at the bottom

20  they're saying if the TrackSessions parameter bit is

21  used to indicate whether the probe can -- should monitor

22  this, then you should do it, basically.   Okay.   So this

23  would say if the TrackSession bit is enabled, then you

24  should do this.

25        Q.    Right.   And the "do this" is so the -- the
```

1 first step would be -- when the first packet of many

2 transactions is sent to the port mapper program --

3 program, it would be decoded by the probe, right?

4   A.   That it would be decoded by -- yes, that it

5 would be tracked as per the -- the child protocol that

6 was indicated in the port mapper request, right.

7   Q.   So the probe would then track that first

8 exchange in the RPC protocol with the port mapper

9 program, correct?

10   A.   Yes.

11   Q.   And then the subsequent packets would be

12 decoded and correctly identified by remembering the port

13 assignment that was identified by the port mapper

14 program, right? That's how it's described?

15   A.   That's how it's described, yes.

16   Q.   And that's also how you describe practicing

17 your patent in Figure 2, correct?

18   A.   Yes, I believe that would be consistent.

19   Q.   Okay.

20   MR. LYONS: I pass the witness.

21   THE COURT: Is there redirect?

22   MR. HARTSELL: Briefly, Your Honor.

23   REDIRECT EXAMINATION

24 BY MR. HARTSELL:

25   Q.   Mr. Maixner, was TrackSessions you and your

 1 co-inventors --

 2   MR. HARTSELL: Strike that.

 3   Q.   (By Mr. Hartsell) Earlier today when you

 4 testified about your invention, is it the same thing as

 5 TrackSessions?

 6   A.   No, I don't see it as the same thing.

 7   Q.   And earlier today, you talked about RMON and

 8 RMON being a -- tables for statistics; is that correct?

 9   A.   Yes, that's correct.

10   Q.   Does your invention have any -- is your

11 invention related to actually collecting data?

12   A.   Temporarily. And so the -- the big

13 distinction that, you know, I -- I have between RMON is

14 that it's meant to be, you know, a higher-level

15 aggregating database, if you will. It's meant to keep

16 track of information, meant to keep track of information

17 for a long time, anywhere from days, weeks, months.

18 The object of the -- the object of the invention was

19 certainly to keep track of similar information but all

20 on a much more transient basis. And in a fashion that

21 could keep up with packets and real-world needs, you

22 know, not just for monitoring applications but for other

23 applications that needed similar -- that would need to

24 be benefited by the visibility.

25   Q.   Is it fair to say that RMON is about

```
 1 presenting data?

 2                 MR. LYONS:  Objection -- objection,

 3 leading, Your Honor.

 4                 THE COURT:  Sustained as to leading.

 5                 MR. HARTSELL:  I have no further

 6 questions.

 7                 THE COURT:  You pass the witness?

 8                 MR. HARTSELL:  Pass the witness.

 9                 THE COURT:  Is there further cross?

10                 MR. LYONS:  No, Your Honor.

11                 THE COURT:  You may step down,

12 Mr. Maixner.

13                 THE WITNESS:  Thank you, Your Honor.

14                 THE COURT:  Plaintiff, call your next

15 witness.

16                 MR. DAVIS:  Thank you, Your Honor.

17 Plaintiffs call Mr. Brad Brunell to the stand.

18                 THE COURT:  Please have a seat.

19                 You've been previously sworn?

20                 THE WITNESS:  Yes, I have.

21                 MR. DAVIS:  Your Honor, may I approach

22 and pass out the binders?

23                 THE COURT:  You may.

24                 MR. DAVIS:  Thank you.

25                 THE COURT:  All right.  Counsel, you may
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 1  proceed.

 2              MR. DAVIS:  Thank you, Your Honor.

 3      BRAD BRUNELL, PLAINTIFF'S WITNESS, PREVIOUSLY SWORN

 4                   DIRECT EXAMINATION

 5  BY MR. DAVIS:

 6      Q.   Good afternoon, Mr. Brunell.

 7      A.   Good afternoon, Mr. Davis.

 8      Q.   Would you please introduce yourself to the

 9  jury?

10      A.   My name is Brad Brunell.  I'm the managing

11  member of Packet Intelligence.

12      Q.   And is it okay with you if during your

13  examination I refer to Packet Intelligence as PI?

14      A.   Yes, that's fine.

15      Q.   What is PI's involvement in this case?

16      A.   PI owns the patents that are being asserted in

17  this case.

18      Q.   Now, are you married, sir?

19      A.   Yes, I am.  I have a lovely wife.

20      Q.   Do you have any kids?

21      A.   I do, I have three children.

22      Q.   What is your educational background?

23      A.   I have a BA from the University of California

24  at Los Angeles.

25      Q.   Do you have any technical experience?
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 1        A.    Yes, I was fortunate -- I grew up in the San

 2   Francisco Bay area, and my father got me a computer when

 3   I was in junior high school, and so I was programming in

 4   junior high and high school and started a business while

 5   I was in college doing that.

 6        Q.    Have you ever worked for any technology

 7   companies?

 8        A.    Yes, I worked for Microsoft for 16 years.

 9        Q.    In your time at Microsoft, did you ever have

10   experience with patents?

11        A.    Yes, I was responsible for the business

12   aspects of Microsoft's digital media products, like

13   Windows Media Player and streaming audio and video over

14   the Internet in the time frame of the late '90s that we

15   were talking about earlier.  And from that, Microsoft

16   was a late entrant and had a lot of patent problems.

17        Q.    Well, you mentioned the word "late entrant."

18   Would you please explain what is -- it means to be a

19   late entrant to a certain area of technology?

20        A.    Sure.  By the time computers were trying to

21   deliver audio and video over the Internet, there had

22   already been lots of ways to broadcast music or audio

23   over radio or through your -- your stereo system.  TV

24   had been broadcasting video over a cable television.  So

25   there were patents that were already existing in the
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     1 form of audio compression and video compression and the

     2 ways to deliver audio and video. So Microsoft, as a

     3 late entrant, had to deal with those other people that

     4 owned patent rights in that space.

     5   Q.   And so what did you do at Microsoft to help

     6 Microsoft navigate those fields?

     7   A.   Well, as the business person responsible for

     8 those products, I had to figure out how we were going to

     9 solve that, and that involved negotiating license

    10 agreements with people that had rights that we needed.

    11 That involved -- in a couple cases we acquired some

    12 small companies that had done interesting inventive work

    13 on delivering audio and video over the Internet, so we

    14 acquired those companies partly for their patent rights.

    15   Q.   And so as a result of addressing these issues

    16 with patent rights, what happened next while you were at

    17 Microsoft?

    18   A.   Well, I guess I did a good job on that. I got

    19 promoted to run patent licensing for all of Microsoft,

    20 so I was made general manager of intellectual property

    21 licensing.

    22   Q.   What were your responsibilities as general

    23 manager of intellectual property licensing at Microsoft?

    24   A.   I hired and ran a team of 12 people that was

    25 responsible for inbound and outbound patent licensing.

1   Q.   What is inbound patent licensing?

2   A.   Inbound would be a case like -- like I was

3   describing in the digital media area where third-party

4   companies would come to Microsoft and say, hey, you're

5   using our patents, and my team would have to figure out

6   how to resolve that. And we would end up a lot of times

7   doing acquisitions or -- or licensing in the patents.

8   Q.   What is outbound licensing?

9   A.   Well, outbound licensing, Microsoft had about

10   3,000 patents and spent billions of dollars a year on

11   research and development. And so it created a lot of

12   ideas and inventions that it couldn't use itself, and so

13   Microsoft would -- sometimes we'd sell those off to

14   other companies that needed them that were doing

15   products in that space. A couple times we actually took

16   interesting technologies that Microsoft is not going to

17   make products of and we spun them out and worked with

18   venture capital firms to create new companies. And then

19   we also had a -- a pretty significant licensing business

20   where people were using Microsoft's technologies and

21   their products, and we were collecting patent licensing

22   revenue.

23   Q.   How long did you do this for Microsoft?

24   A.   A little over two years in that role.

25   Q.   And just to get a sense for the scope of what

 1 you were doing, during these two years, what would you

 2 say the total value is of the deals that you did both

 3 inbound and outbound?

 4   A.   Inbound licensing was two years, we probably

 5 did about $500 million worth of transactions, my team

 6 did.

 7   Outbound, probably in the range of a billion

 8 dollars of transactions. After I left, that group

 9 became even more successful and the Android phones had a

10 lot of Microsoft intellectual property in them, and so

11 it became a multibillion dollar revenue business for

12 Microsoft.

13   Q.   So is it fair to say you spent a fair amount

14 of time evaluating patents when you were at Microsoft?

15   A.   Yes, I did.

16   Q.   What are some of the things that you would

17 look at when you were looking at a patent at Microsoft

18 to determine the quality of the patent?

19   A.   Sure. You would look at first what the patent

20 said, what technology area they were in. You would look

21 at the number of patents. So an invention might have

22 multiple patents for multiple functions or ways to do

23 things. You would look if other people had licensed it,

24 that might be a sign of value. You would look at who

25 the inventors were. So like in this example, Mr. Dietz

1 and Mr. Maixner are -- have been in this field for a

2 long time. They had a lot of expertise before they did

3 their inventions, and then you keep getting more

4 expertise.

5   So that's generally better quality work

6 because people were working on real problems and solving

7 real problems.

8   You also look at forward citations, so I think

9 Mr. Skiermont mentioned in the opening that this patent

10 portfolio had been cited hundreds of times. That's also

11 a good sign of quality that -- or that other people have

12 built on top of the patents, and that may be a sign that

13 they're foundational patents.

14   Q.   Have you ever invented anything, Mr. Brunell?

15   A.   Yes, I'm an inventor on nine patents from my

16 time at Microsoft.

17   Q.   And did you have any co-inventors?

18   A.   Well, most of that work was done with

19 Microsoft research so you're working in teams, kind of

20 similar to the team that these guys had of five, six

21 people. And so -- but the most famous person was Bill

22 Gates who is the president -- who was the CEO of

23 Microsoft at the time.

24   Q.   So do you know Bill Gates?

25   A.   Yes, I worked with him pretty regularly.

1   Q.   Mr. Brunell, why did you leave Microsoft?

2   A.   I had been there 16 years, and it was very

3   demanding. I had a lot of international travel, and I

4   had long hours in the office. Like I'd go in and have

5   meetings from 8:00 a.m. until 7:00 at night. And I had

6   a young family, and I wanted to spend more time with my

7   family and have a better quality of life. And I also

8   wanted to do challenges, working on things that were

9   more hands-on versus, you know, such a high level

10   with -- you know, so many people and meetings and

11   process.

12   Q.   So what did you do after you left Microsoft?

13   A.   Well, I spent time with my family, for one.

14   And then I also did some consulting projects and some

15   various work in the intellectual property space. I

16   determined that my -- my best skills were understanding

17   and understanding how to do intellectual property

18   management and licensing. And so I focused in those

19   areas.

20   Q.   So how did you feel when you left Microsoft?

21   A.   Well, it was a little bit scary. It was a

22   great opportunity. I learned a lot and -- and it was --

23   it was a well paying job and had great healthcare. And

24   so when you start off on your own, you worry about those

25   things that, you know, are you -- you have to make a

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 1  living and -- and figure out how to pay for those

 2  things.  I had a young family.  But it was also exciting

 3  to be, you know, taking on -- taking on new challenges.

 4       Q.   And so when you left Microsoft and started

 5  your own business, what was the business that you were

 6  going into?

 7       A.   Well, I did two things, sort of -- sort of the

 8  start of this company.  I -- I -- I met Mr. Vachon, and

 9  we decided to do a patent -- patent business together,

10  patent -- intellectual property management business

11  together.  And then to make sure I could pay the bills,

12  I also took a -- a consulting project in London and

13  brought my family with me to run research and

14  development for the British Broadcasting Corporation on

15  a part-time basis while I started the patent licensing

16  business.

17                 THE COURT:  Mr. Brunell, if you'd slow

18  down just a little bit it'd be helpful.

19                 THE WITNESS:  Yes, Your Honor.

20                 THE COURT:  Let's continue, Counsel.

21                 MR. DAVIS:  Thank you, Your Honor.

22       Q.   (By Mr. Davis)  Can you give us a high-level

23  description of what the patent -- I'm sorry,

24  intellectual property management business looks like.

25       A.   Sure.  Intellectual property is kind of like
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 1  owning land.   The key -- where you make your money is
 2  buying -- buying the -- the property at the right price
 3  and -- and managing it well.   And so it's doing the
 4  work, the due diligence to understand what these
 5  inventions are, how they apply, all the quality, things
 6  that we talked about before, and then also understanding
 7  who's using it in the marketplace.   So -- and then
 8  hopefully doing the right work to get those people to
 9  license the -- the patents and pay you royalties.
10       Q.   Do you have any analogies that you can use to
11  help explain what managing intellectual property is
12  like?
13       A.   Sure.   What I -- when I'm here in Texas, the
14  most relatable is probably if you own land and it has
15  oil or mineral rights in it, you would -- if people
16  wanted to get access to those mineral rights or oil
17  rights on your land, they would get your permission.
18  And if they got your permission, they would pay you a
19  royalty for the value that they took out of your land.
20  And this is very similar.   You know, we have property
21  rights.   They have value.   And in this case, we don't
22  have permission, but we're hoping to get compensated for
23  the value that's being taken from our property.
24       Q.   How does the patent system relate to managing
25  intellectual property?
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 1        A.    Well, as Mr. Skiermont talked about in his
 2   opening, you know, our Founding Fathers put patent
 3   rights in place to encourage companies to invest in
 4   creating new ideas and inventions and then to share them
 5   in trade for that exclusive 20-year time frame by which
 6   they can actually own the exclusive rights and have a
 7   way to get compensated and paid for that.
 8             So like Mr. Dietz's example earlier where his
 9   chief financial officer said, hey, we want you to patent
10   these things because that company made a multi-million
11   dollar investment in research and development and they
12   wanted to be able to actually keep that value for
13   themselves rather than having other people copy it and
14   use it without paying them, it wouldn't make sense to
15   make that investment if that could happen.
16        Q.    And so what is the bargain or the trade-off
17   that the patent system provides?
18        A.    Well, the trade-off is that that 20-year
19   exclusive window means that as an investor, you're --
20   you're happy to make that investment because you know
21   that you're going to get economic value if the things
22   you create are valuable.  Not all the things that get
23   created are valuable, but you hope that you are.  And if
24   you're fortunate, you -- you see something like what --
25   what these inventors have created where something really
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 1  valuable gets created.

 2       Q.    Now, were patents important to Microsoft's

 3  business?

 4       A.    Well, I mentioned Microsoft invested multiple

 5  billions of dollars a year on research and development,

 6  and so intellectual property protection was crucial, not

 7  just in the United States but around the world.  And so

 8  Microsoft invested a lot of resources and effort into

 9  that because it was crucial as a way to get compensated

10  for its -- its research and development investment.

11       Q.    Does Packet Intelligence make any products

12  based upon this technology?

13       A.    No.  Packet Intelligence's business is

14  licensing the intellectual property.

15       Q.    When you were at Microsoft, did Microsoft have

16  patents or portfolios of patents that it didn't make

17  products on?

18       A.    Yes, absolutely.

19       Q.    When was Packet Intelligence founded?

20       A.    June 2012.

21       Q.    How would you describe Packet Intelligence's

22  business?

23       A.    Well, Packet Intelligence acquired the -- the

24  Dietz portfolio, and -- and its business is managing

25  that portfolio to -- to essentially derive revenue and
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 1 -- and to protect and value the life of the portfolio.

 2   Q.   What is your general role within Packet

 3 Intelligence?

 4   A.   Well, so I -- I'm the managing member. My

 5 role is essentially I pick the patent portfolio and

 6 worked with people that do the diligence. And then I

 7 also put together the resources to manage the portfolio

 8 to make sure that we knew what we were doing before we

 9 asked people to take licenses. And then I also work

10 with companies that are licensees to negotiate the

11 license agreements.

12   Q.   Now, I think -- I believe earlier you

13 mentioned your partner Mr. Vachon. Can you tell -- tell

14 the jury a little bit about Mr. Vachon?

15   A.   Sure. Mr. Vachon was an executive at Oracle,

16 which is a large company in Silicon Valley that makes

17 database software. And he's also been an executive --

18 like a president and CEO of a couple different publicly

19 traded software or technology companies. He's on --

20 been on boards of directors of -- of lots of companies,

21 so he's a very noteworthy and skilled executive in the

22 technology industry.

23   He and I met in about 1996, and we had a lot

24 of -- he had actually also been doing some projects that

25 involved intellectual property, and we had a lot of

1 philosophical alignment about how to run the business.

2 And then we also were in the same place where we had

3 young families and wanted to have a quality of life and

4 a balance. And so it ended up making sense for us to go

5 into business together.

6   Q.   How did Packet Intelligence come to acquire

7 the Dietz patents that are asserted in this case?

8   A.   I'm personal friends with Dr. Dov Rosenfeld

9 who prosecute -- who prosecuted the patent portfolio.

10   Q.   How did your friendship with Dr. Rosenfeld

11 lead to you purchasing these patents?

12   A.   I was having lunch with Dr. Rosenfeld one day

13 in, I think, the spring of 2012, and he mentioned that

14 the best patents he'd ever worked on were owned by this

15 company Exar. And they were having financial

16 difficulties and were not necessarily interested in --in

17 keeping the patents, and they were not investing in

18 completing some of the patent work in Japan. And he

19 thought that was a mistake. So he asked -- he knew that

20 I was an expert in licensing and that I had a business.

21 And so he suggested that I talk to Exar.

22   Q.   I'd like to show you PTX-3, if I could,

23 please. And is this --

24   MR. DAVIS: If you could blow up the

25 section where it talks -- shows Paragraph 74 there, the

1 attorney, agent, or firm.

2   Q.   (By Mr. Davis) What does that mean on the

3 face of this patent?

4   A.   That means that Dr. Dov Rosenfeld worked with

5 the Patent Office over many years and with inventors to

6 make these patents happen.

7   Q.   So what happened next in terms of the -- the

8 story of how Packet Intelligence or PI came to acquire

9 these patents?

10   A.   Well, I guess in the summer of 2012, we

11 negotiated with Exar to acquire the patent portfolio.

12 And I think we closed in September of 2012 the

13 acquisition of the patents.

14   Q.   Now, before you purchased these patents from

15 Exar, did you do anything to make sure that you knew

16 what you were buying?

17   A.   Yes. I mentioned the diligence steps earlier

18 that I would go through as an executive at Microsoft.

19 We have a chief IP counsel, Ron Moore. Mr. Moore and I

20 and the team of other people spent significant time

21 doing due diligence to understand that Exar indeed had

22 the rights to sell -- it's called chain of title, so we

23 made sure that they actually owned it. Kind of like

24 somebody would have a pink slip on a car, you make sure

25 that they actually can sell you the car.

 1   We also looked at -- I think it's called prior

 2 art, to make sure we understood that these patents were

 3 really good inventions in good standing, the inventors

 4 and forward citations.

 5   Q.   Okay. So you mentioned some of the things

 6 that you did. You mentioned -- well, let me ask you

 7 this. Did you study the technology that's at issue in

 8 the patents?

 9   A.   Yes, in depth. And we looked at -- at vendors

10 in the marketplace that were doing the technology.

11   Q.   And in studying the technology, what did that

12 indicate to you as to the quality of the patents?

13   A.   Well, we thought there were -- that the

14 technology was being broadly used, and it made economic

15 sense that there was enough licensing revenue

16 potentially that we would like to acquire the patents.

17   Q.   Did you identify the field of technology that

18 the portfolio -- the Dietz portfolio related to?

19   A.   Yes. We looked at -- there's a term called

20 deep packet inspection or data classification. Some --

21 you've heard some of the language in -- in the Court

22 today, but we looked at products that did that in the

23 networking space that we thought would be relevant to

24 the inventions.

25   Q.   And when you looked at this field of the

 1 technology, what did it tell -- indicate to you as to

 2 the quality of the patent portfolio?

 3   A.   Well, we thought based on all the quality

 4 research we did that this was foundational, valuable

 5 intellectual property.

 6   Q.   How many patents were in the Dietz portfolio?

 7   A.   There were 20 -- I guess today there are 28

 8 patents.

 9   Q.   Was the number of patents in the portfolio --

10 did that indicate anything to you about the quality?

11   A.   Well, there were 10 U.S. patents, six Chinese,

12 seven Australian, only two in Europe because Exar had

13 let some of them lapse. And then there were three in

14 Japan. The -- all those other Patent Offices, in

15 addition to the U.S. Patent Office, doing research and

16 believing that these are true and good inventions, is --

17 is, again a sign of respect and quality that we thought

18 was --was interesting.

19   Q.   Did you look at who the inventors are -- were

20 in evaluating the Dietz portfolio?

21   A.   Yes. Dr. Rosenfeld gave me background on each

22 of the inventors. I have immense respect for him.

23 Again, he's a close personal friend and brilliant mind.

24 And also we did initial research on the Internet about

25 the inventors and -- and thought that they were all

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 1  relevant and skilled in the space.
 2       Q.   And did the -- the relevance and the skill
 3  level of the inventors make you think anything about the
 4  patent portfolio?
 5                 MR. KRAEUTLER:  Objection.
 6                 THE COURT:  State your objection.
 7                 MR. KRAEUTLER:  Opinion.
 8                 THE COURT:  Overruled.
 9       A.   Can you repeat the question, please,
10  Mr. Davis?
11       Q.   (By Mr. Davis)  Sure.  And I'll ask it a
12  little different way.
13            When you were looking in -- looking into who
14  the inventors were, did it -- did you have -- did that
15  have any indication or -- or make you feel any certain
16  way towards the value of the patent portfolio?
17       A.   Yes.  For instance, at the time Mr. Dietz was
18  the CTO of Websense, which was a publicly traded
19  Internet security firm, and you heard about his -- his
20  top secret clearance and things like that, when you have
21  those kind of capabilities, it's just a sign of quality
22  inventors and people that know what they're doing in the
23  space.
24            And -- and I knew that also that they had --
25  they had -- all these people had worked for many years
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1 in the networking space, so they -- they understood the

2 problems and -- with invention it's incremental

3 learning, and so that takes time. And there was -- I

4 thought very convincing that these people were in the

5 right time and place.

6   Q.   Now, I think you mentioned earlier one of the

7 things you looked at at Microsoft was forward citations.

8   Did you look at forward citations in the Dietz

9 portfolio?

10   A.   Yes, I did. I believe there were over 350

11 citations wide, tens of companies at the time we

12 purchased the portfolio. I think there's over 500 now.

13   Q.   And if you would, would you please explain

14 just what forward citations are?

15   A.   Sure. Forward citations are where other

16 companies are doing inventions, and they look -- either

17 they look or the Patent Office finds them, and those are

18 known as prior art. So that means that people built on

19 top of it, that they recognize that these inventions

20 come before them.

21   And so when something is cited broadly like

22 this across many companies and a large number, that's

23 usually a sign of something foundational that somebody

24 has built upon it. And the number was extraordinarily

25 high, the number of citations, compared to what I would

 1 normally see.

 2   Q.   What did the number of forward citations

 3 indicate to you as to the opinion that the market had of

 4 these portfolios?

 5   MR. KRAEUTLER: Objection.

 6   THE COURT: State your objection,

 7 counsel.

 8   MR. KRAEUTLER: It's opinion. I think

 9 this is expert testimony, Your Honor.

10   MR. DAVIS: Your Honor, he's not

11 testifying as an expert. He's testifying about what he

12 looked at when he was evaluating the Dietz portfolio to

13 indicate whether it would be a good investment or not.

14 I think this is -- this is his opinion.

15   THE COURT: He's entitled to testify to

16 what these things meant to him. He's not entitled to

17 testify to what they meant to broader market in general.

18   Restate your question.

19   MR. DAVIS: Your Honor -- excuse me.

20   Q.   (By Mr. Davis) Mr. Brunell, what did the

21 number of forward citations indicate to you as to the

22 quality of the Dietz portfolio?

23   A.   Well, it meant that other companies respected

24 the inventions and -- and thought it was the smartest or

25 most optimal way to do data inspection and

 1 classification. And so other people had built upon it.

 2   And -- and we looked at many of the companies

 3 that we were citing were also companies that we thought

 4 were using the technology.

 5   Q.   If these patents were so valuable, why did

 6 Exar want to sell them?

 7   A.   I mentioned earlier, Dr. Rosenfeld told me

 8 that Exar wasn't using the inventions, they weren't

 9 relevant to their product line. It's expensive to

10 maintain these patents in good standing with these other

11 Patent Offices and the United States Patent Office. It

12 takes -- you have to pay fees kind of like paying your

13 county taxes on your real estate, you have to pay -- pay

14 to keep the patents in good standing so it costs money.

15 And they were having financial challenges.

16   Q.   What about resources, did Exar have the

17 resources to manage this portfolio?

18   A.   No, they did not. It was the responsibility

19 of the general counsel. And I don't know that he was

20 really paying any attention to the Patent Office

21 portfolio.

22   Q.   So Exar had no Brad Brunell, like Microsoft

23 had, to manage its patent portfolio?

24   A.   No, they did not.

25   Q.   What was Exar's core business?

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 1        A.    They make power management chips that they

 2  sell to other manufacturers in the Silicon Valley and

 3  Asia.

 4        Q.    Are the -- are the Dietz portfolios related to

 5  power management chips?

 6        A.    No, they're not.

 7        Q.    So are the Dietz portfolios related to the

 8  core business of Exar?

 9        A.    No, they were not.

10        Q.    How much did Packet Intelligence pay to

11  purchase the Dietz portfolio?

12        A.    It totaled up being $875,000.

13        Q.    How did you -- how did you feel about that?

14        A.    It was a big investment.  Mr. Vachon and I had

15  conversations, and we did a lot of work to make sure we

16  really understood what we were buying and that they were

17  of the quality level that we thought.  It was a big step

18  for us, and we wanted to make sure we were getting it

19  right.

20        Q.    Okay.  I'd like to show you PTX-163, please.

21  Do you recognize this document?

22        A.    Yes, I do.  It's the acquisition of the

23  portfolio from Exar by Packet Intelligence.

24        Q.    And what's being shown here in these two

25  call-outs in Section 2.2.1 and 2.2.2?
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1   A.   Sure.   So initially, in order to help with our

2   risks and our -- our money -- our out-of-pocket first we

3   paid 500,000 for the initial purchase.   And we had

4   installment payments of 125,000 once a quarter.   And we

5   did this because we knew it would take us about a year

6   to do additional research after we purchased the patents

7   to make sure we really understood in detail as best we

8   could which companies were using the technology and --

9   and mapping our inventions to them.   Similar to the kind

10   of work you'll see Dr. Almeroth did, but I think

11   probably better and more detailed than Mr. -- Dr.

12   Almeroth.

13   But anyway, we did a lot of work on that.   And

14   so we wanted to make sure we didn't have too much money

15   going out, and so we paid 500,000 out of pocket but

16   staged over these quarterly payments.

17   And then Exar wanted more money, and so we

18   talked them into, hey, if it's successful and we

19   generate revenue then we'll share some of it, sort of

20   delayed installment purchases.   And we ended up actually

21   generating enough revenue that we paid an additional

22   375,000.   And that's why the total purchase ended up

23   being 875,000.

24   Q.   What does Packet Intelligence do with the

25   patents once it acquired them from Exar?

1   A.   As I mentioned, we spent almost a year with a

2 number of people doing research and doing two things

3 primarily. One is mapping the -- the patent claims to

4 the technology so we could understand whether somebody

5 was using it. And we also did research on those

6 products that we identified to try and estimate the

7 revenue that those companies were making so we could get

8 some approximation of how much money they might need to

9 pay us in royalties.

10   Q.   And was this in -- this research in -- in

11 addition to the pre-purchase due diligence that you had

12 done?

13   A.   That's correct. It was additional and in more

14 detail.

15   Q.   Now, how did you identify the companies that

16 were using the Dietz portfolio?

17   A.   Well, we looked at basically companies that

18 were in -- in the -- basically doing the inventions.

19 It's pretty easy to start. You look at people that were

20 doing deep packet inspection, and there were, you know,

21 over 10 -- there were tens of vendors that were doing

22 that.

23   We also looked at people that cited the

24 patents. They would be more likely to have built on top

25 of it. So we started there and did more work after

 1 | that.
 2 | Q.   Who were some of the forward citers that you
 3 | looked at?
 4 | A.   Well, there were large companies, like the
 5 | slide that Mr. Skiermont showed earlier, like IBM and
 6 | Hewlett-Packard and -- but Cisco was -- was one for
 7 | certain.   And -- and there were other companies.
 8 | Q.   Who else was a forward citer on your patents?
 9 | A.   Well, specifically Tektronix, now owned by
10 | NetScout.
11 | Q.   The very Tektronix NetScout that's sitting
12 | here in the courtroom today?
13 | A.   That's correct.
14 | Q.   Who is Huawei?
15 | A.   Huawei is a Chinese firm that manufactures
16 | networking equipment.   And in China they do mobile
17 | phones, as well.
18 | Q.   What did you do to enforce your patents
19 | against Huawei?
20 | A.   We filed litigation in 2013 here in Marshall,
21 | Texas.
22 | Q.   And were the same three patents at issue in
23 | the Huawei case that are at issue in this case?
24 | A.   Yes, they were.
25 | Q.   Now, is that case still going?

 1   A.   No, they -- they negotiated a settlement about

 2 seven or eight months into the process.

 3   MR. DAVIS: Could I have PTX-301, please?

 4   Q.   (By Mr. Davis) Do you recognize this

 5 document?

 6   A.   Yeah, that's the agreement resolving a

 7 settlement between Huawei and -- and Packet

 8 Intelligence.

 9   MR. DAVIS: And if we could please go to

10 Section 3.1.

11   Q.   (By Mr. Davis) What is Section 3.1, Mr.

12 Brunell?

13   A.   That is the amount of money that Huawei paid

14 in royalty payments?

15   Q.   And how much is that?

16   A. $140,000.

17   Q.   Is that a low amount of money?

18   A.   It was the appropriate royalty given the

19 really few number of units that Huawei had sold.

20   Q.   Why does the number of units indicate that

21 this was an appropriate royalty rate?

22   A.   Well, there are sort of a couple of factors.

23 One is that we didn't get that deep into litigation so

24 we hadn't done really in-depth technical or what's

25 called damages research. And so we didn't have a great

 1 amount of information, but they did share their -- their

 2 sales figures, and they had sold very, very few units,

 3 like a very small number of revenues that was made by --

 4 by Huawei.

 5   And also at the same time the U.S. Government

 6 came out and asked U.S. companies not to buy equipment

 7 made by Huawei because it was a national security risk

 8 because they didn't want a Chinese company being able to

 9 snoop the data on the network and sort of, you know,

10 backdoor it to China because this technology can be used

11 to inspect packets, it could be used to spy or get

12 information, and so the government was worried about a

13 Chinese manufacturer.

14   So Huawei was essentially dead in this market.

15 They had to leave. They were exiting and not selling

16 those products in this market. So there was no future.

17 And the past was only a few number of units.

18   Q.   During the Huawei negotiations, did you have

19 any concerns about the effect that that deal may have on

20 future negotiations?

21   A.   Yes, absolutely. That was the first license

22 agreement, and we know that people like NetScout's

23 Counsel will try and use that as a guideline for what a

24 rate should be. And so we looked at the -- the total

25 number of units. And we said, okay, we want to get at

1 least above 2.5 percent as the royalty rate as a

2 starting point. It wouldn't be exactly a direct

3 comparison on something like this where there -- there's

4 real technical analysis and a damages expert that come

5 later, but it would be sort of as a starting floor

6 point. It would be a reasonable thing, but it's still

7 not really an apples to oranges comparison to what a

8 license would be for NetScout.

9   Q.   And what is the effective rate of the Huawei

10 agreement?

11   A.   About 2.5 percent.

12   Q.   Would PI ever agree to a royalty rate --

13 excuse me, of less than two and a half percent?

14   A.   No, never.

15   Q.   Now, you also filed a lawsuit against Cisco;

16 is that right?

17   A.   That's correct.

18   Q.   Who is Cisco?

19   A.   Cisco is the very first company that did a

20 computer router. They're one of the original companies

21 in the computer networking field.

22   You saw Mr. Bierman earlier writing some of

23 the IETF specifications. Cisco was basically a thought

24 leader and -- and a pretty known company in the Silicon

25 Valley. And so, you know, they're based in Silicon

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 1 Valley.
 2      Q.   Now, did the Cisco lawsuit get resolved before
 3 trial?
 4      A.   Yes, it did.  They settled about 11 months
 5 after we initiated the conversation through litigation.
 6                MR. DAVIS:  Now, if I could have the
 7 first page, please -- first page only of PTX-320.
 8      Q.   (By Mr. Davis)  Do you recognize what this is?
 9      A.   Yes, I do.  That's the settlement and license
10 agreement between Cisco and Packet Intelligence.
11                MR. DAVIS:  And, Your Honor, at this
12 time, we're about to go into some information that would
13 require us to seal the courtroom, so if I could request
14 that the courtroom be sealed for the next series of
15 questions.
16                THE COURT:  All right.  Based on
17 counsel's request, I'm going to order the courtroom
18 sealed, which means that if you're present in the
19 courtroom and you are not subject to the existing
20 protective order that's been entered in this case, then
21 you should excuse yourself during the time the courtroom
22 is sealed.  So if you're present in the courtroom --
23 that obviously does not include corporate
24 representatives.
25                MR. KRAEUTLER:  Thank you, Your Honor.
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 1                    THE COURT:   But otherwise, if you're in

 2  the gallery and you're not subject to the protective

 3  order, you need to be outside the courtroom.

 4                    (Courtroom sealed.)

 5                    (REPORTER'S NOTE:   This portion of the

 6  testimony was filed under seal per order of the Court.)

 7                    (Courtroom unsealed.)

 8       Q.    (By Mr. Davis)   So, Mr. Brunell, that -- what

 9  about NetScout, how many patents is PI currently

10  asserting against NetScout in this case?

11       A.    The three patents that are the exhibits in

12  your book there.

13       Q.    Now, the Dietz portfolio includes more than

14  three patents, doesn't it?

15       A.    Yes, it does.

16       Q.    Why didn't PI assert more or all of -- all 10

17  of its U.S. patents against NetScout in this case?

18       A.    The difference between asserting three and

19  more wasn't going to be a difference relative to the

20  economic value.   Essentially, the -- the value that

21  NetScout is -- is infringing on would be the same if it

22  was three four or five.

23            And so we basically -- these three are a

24  sufficient representation of the -- of the value.   And

25  -- and if -- if we did more, it wouldn't necessarily
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1 change the royalty calculation.

2   Q.   Have you had any conversations with NetScout?

3   A.   Yes, I talked to Mr. Singhal by phone in May

4 of 2017.

5   Q.   And how did that conversation end?

6   A.   It was very unproductive.

7   Q.   Mr. Brunell, why are we here today with

8 NetScout?

9   A.   Packet Intelligence owns the intellectual

10 property that we believe NetScout is infringing. As was

11 mentioned earlier by Mr. Skiermont, there are no patent

12 police, so we try and work out a resolution, but if we

13 can't get to a resolution, this jury trial is only --

14 the only way to get to a judgment and a resolution of

15 the economic value.

16   So we're hoping that as you assess the facts,

17 that you decide that the -- the evidence is there and

18 that a royalty gets paid by NetScout.

19   MR. DAVIS: Pass the witness, Your Honor.

20   THE COURT: All right. Before we proceed

21 with cross-examination of this witness, ladies and

22 gentlemen, we're going to take a short recess. I'm

23 going to try to keep this as short as possible.

24   If you will, just close and leave your

25 notebooks in your chairs, follow all my instructions,

1 including not to discuss the case among yourselves, and

2 we'll be back shortly to continue with cross-examination

3 by the Defendant. The jury's excused for recess at this

4 time.

5   COURT SECURITY OFFICER: All rise.

6   (Jury out.)

7   THE COURT: All right. Counsel, I intend

8 for this to not be longer than 10 minutes. The Court

9 stands in recess.

10   (Recess.)

11   (Jury out.)

12   COURT SECURITY OFFICER: All rise.

13   THE COURT: Be seated, please.

14   All right. Cross-examination.

15 Mr. Kraeutler, you want to go to the podium?

16   MR. KRAEUTLER: Yes, sir.

17   THE COURT: Let's bring in the jury,

18 please, Mr. Elliott.

19   (Jury in.)

20   THE COURT: Please be seated.

21   All right. We'll proceed with

22 cross-examination of the witness by defense counsel.

23   You may proceed.

24   MR. KRAEUTLER: Thank you, Your Honor.

25   CROSS-EXAMINATION

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 1  BY MR. KRAEUTLER:

 2       Q.   Good afternoon, Mr. Brunell.

 3       A.   Good afternoon, Mr. Kraeutler -- Kraeutler?

 4       Q.   Kraeutler.

 5       A.   Kraeutler.

 6       Q.   Mr. Brunell, the Cisco case never went to

 7  trial; is that correct?

 8       A.   No, it settled before the jury trial.

 9       Q.   So Packet Intelligence's claims were never

10  tested in court?

11       A.   They were not.

12       Q.   Inventorship was not challenged in that case?

13       A.   No.

14       Q.   In the Cisco case, there were a lot of accused

15  products; is that right?

16       A.   I believe so.  I don't recall very accurate.

17       Q.   Well, there were two in this case.  There were

18  a lot more than two in the Cisco case; isn't that

19  correct?

20       A.   Yes, there were more than two.

21       Q.   The Cisco case did not involve probes that are

22  used by telephone companies, did it?

23       A.   I don't recall.

24       Q.   Cisco's a much larger company than Tektronix

25  Texas; is that correct?
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 1        A.    I believe so.

 2        Q.    It's the 12th largest IT company in the United

 3  States?

 4        A.    I don't know exactly, but that sounds

 5  possible.

 6        Q.    Has more than 70,000 employees?

 7        A.    Again, I don't know exactly, but certainly

 8  sounds possible.

 9        Q.    Are you aware that Tektronix has 500 employees

10  in Plano?

11        A.    I don't know how many employees Tektronix has.

12        Q.    The Cisco case included all of Packet

13  Intelligence's patents -- patents; isn't that right?

14        A.    No, the litigation did not include all the

15  patents.

16        Q.    Well, it included 10 U.S. patents, 11 U.S.

17  patent applications, 11 foreign patents, and 12 foreign

18  patent applications in the settlement; isn't that

19  correct?

20        A.    I'm sorry, you said litigation.  It's not

21  possible to litigate -- so the settlement, they did give

22  a license to the entire patent portfolio.

23        Q.    And in the current case, Packet Intelligence

24  has asserted three patents?

25        A.    That's correct.
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 1        Q.    And you're aware, are you not, that Packet

 2   Intelligence's damages expert has said that the Cisco

 3   settlement cannot be used to determine Packet

 4   Intelligence's alleged damages in this case?

 5        A.    No, I was not allowed to read the expert's

 6   report.   It was attorney's eyes only.

 7        Q.    I want to clarify just a couple things from

 8   direct.

 9             You said that your company, quote, does the

10   right work to get people to license, end of quote.   That

11   means that Packet Intelligence files lawsuits to get

12   people to do the right thing; isn't that correct?

13        A.    In this case, yes.

14        Q.    Well, you've had four so far that you've

15   initiated; is that correct?

16        A.    I believe that there's been in the United

17   States two patent litigations.   This would be the third

18   and fourth, yes.   There's -- there's another one

19   outstanding in the United States.

20        Q.    So that doesn't mean approaching potential

21   licensees and offering them a business relationship

22   until after you sue?

23        A.    There are challenges to doing that based on

24   the law.   You probably don't really want me to

25   elaborate, but it's not very feasible to do often.
```

1   Q.   In the current case, you did not approach

2   Tektronix Texas before filing suit?

3   A.   No, we did not.

4   Q.   You did not identify the patents to Tektronix

5   Texas before filing suit?

6   A.   No, we did not. Other than the citation.

7   Q.   And you have no information that Tektronix

8   Texas or NetScout had any knowledge, whatsoever, of

9   these patents before you filed suit; is that correct?

10   A.   I would infer that there was some knowledge

11 because of the citation; otherwise, no.

12   Q.   You said that your job includes managing

13 resources, that really means managing the law firms that

14 are bringing lawsuits on your behalf; is that right?

15   A.   No, there are also other people, technical

16 people, researchers.

17   Q.   Your principle potential expense is the cost

18 of lawyers?

19   A.   No.

20   Q.   And is that a result of -- well, I'll withdraw

21 that.

22   In your opening, you said that -- in the

23 opening that your lawyer gave, you said that Packet

24 Intelligence is building a licensing business. That

25 doesn't actually mean preparing to manufacture, does it?

```
 1        A.    No.

 2        Q.    And -- and Packet Intelligence doesn't have a

 3   manufacturing plant?

 4        A.    No.

 5        Q.    Makes no products?

 6        A.    No.

 7        Q.    And in the current case, because you did not

 8   contact Tektronix Texas, you never inquired about their

 9   products, you never obtained information from them that

10   would allow you to assess whether there truly was

11   infringement or not before filing suit?

12        A.    Preliminary research was done with a strong

13   belief that there was enough evidence in our mind for

14   infringement.  And then through the litigation, there's

15   discovery where you learn more.

16        Q.    But you never approached Tektronix Texas

17   before the suit to get information about their products

18   that would allow you to assess whether they actually

19   infringe these patents?

20        A.    There was lots of information on the Internet.

21        Q.    And you never approached Tektronix Texas?

22        A.    No.

23        Q.    When you purchased the Dietz patents, you

24   believed those patents to be valid; is that correct?

25        A.    Absolutely.
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 1   Q.   But you did not know them to be valid?

 2   A.   As best as we can determine from our research

 3 and the fact that the United States Government issued

 4 them, we believed them to be valid.

 5   Q.   You knew that if you asserted the patents in

 6 court, that the Defendants would have an absolute right

 7 to defend against those charges by proving the patents

 8 to be invalid; is that correct?

 9   A.   If they could find enough information and

10 prove it with the standard necessary.

11   Q.   And you knew that the Defendants -- that any

12 Defendant would have the absolute right to come into

13 court and challenge the patents on the ground that the

14 alleged inventors were not the true inventors?

15   A.   I know that in litigation, there are dialogues

16 to assess the quality. And I guess in your case you're

17 choosing to try to invalidate the patents, but that

18 didn't happen necessarily in the other cases.

19   Q.   But you knew that every Defendant would have

20 that right and that choice?

21   A.   You have that right without litigation. You

22 could contact the Patent Office at any time.

23   Q.   If you knew about the patents?

24   A.   Well, if you had proof, then you could, yes.

25 Anybody could if they had proof that the patents were

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 1  invalid.
 2      Q.    You knew that the alleged inventors in this
 3  case would be -- were entitled to patent protection only
 4  if they were truly first in the technology described in
 5  their claims?
 6      A.    I believe them to be first.
 7      Q.    But you knew that if they were not first, the
 8  patents could be invalidated?
 9      A.    That is always a risk.
10      Q.    And you know -- you knew that the Patent
11  Office sometimes makes mistakes?
12      A.    I don't know the error rate of the Patent
13  Office.
14      Q.    So the Plaintiff in this case is Packet
15  Intelligence LLC.  And it owns the Dietz patents,
16  correct?
17      A.    That is correct.
18      Q.    And then Packet Intelligence LLC is owned by
19  patent -- Packet Intelligence Holdings LLC?
20              MR. DAVIS:  Objection, Your Honor.  We
21  have a motion in limine on this.
22              THE COURT:  Approach the bench, Counsel.
23              (Bench conference.)
24              THE COURT:  What's your objection,
25  Mr. Davis?
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 1   MR. DAVIS: Your Honor, we have a motion

 2 in limine on not trying this case on who the entities

 3 are beyond that they are non-practicing entities.

 4 I believe that Mr. Kraeutler is about to go into

 5 higher -- structure of Packet Intelligence. I don't

 6 know how far he's going, but any higher than Packet

 7 Intelligence is irrelevant. It's not -- it's not going

 8 to do anything.

 9   And what he's going to ultimately get

10 into is the -- the fact that it's owned -- there's --

11 there's two levels of companies and then ultimately

12 IBMG, the Swiss company. And so we don't think any --

13 we think the MIL excludes all information about a record

14 structure of Packet Intelligence.

15   THE COURT: What's your response,

16 Mr. Kraeutler?

17   MR. KRAEUTLER: Your Honor, there is --

18 there was a MIL granted that we cannot get into the fact

19 that it's a Swiss company.

20   THE COURT: Uh-huh.

21   MR. KRAEUTLER: There also were rules

22 denied, and Your Honor said that we could get into the

23 financial interest of witnesses. And in this case, the

24 witness has a financial interest at multiple layers.

25 And in addition, there was a MIL that said that we

1 couldn't get into the financial interest of lenders to

2 the business IPMG, the Swiss company, which I will not

3 refer to as a Swiss company, lends money and has a

4 stake, in effect divides the proceeds from litigation,

5 and Mr. Brunell has an ownership interest in that

6 entity.

7   MR. DAVIS: Your Honor, that's not

8 relative to the issues in this case.

9   THE COURT: All right. Well, you haven't

10 asked him anything about it, whether he has a financial

11 interest in the outcome of the case. You're talking

12 about the company as one layer and then another layer

13 above it, and none of this is done with relevance or

14 with relation, rather, to the witness's personal

15 financial interest.

16   You can certainly inquire as to his

17 personal stake in the outcome of the case, but I don't

18 see any reason to do it with specificity. If you want

19 to say -- if you want to ask him are there other --

20 other entities out there that Packet may be a part of

21 that you also own an interest in and would you benefit

22 at that level, you can do it generically, but you don't

23 need to name names and identify locations.

24   If you want to ask him does Packet have

25 loans and do you own an interest in the lenders and

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 1  could you benefit by that, you can do it generically.

 2                    And you can do it related to his

 3  potential bias as having an interest in the outcome of

 4  the case, but that -- that should be the extent of it.

 5                    MR. KRAEUTLER:  I shall.

 6                    MR. DAVIS:  Your Honor, I would just

 7  suggest that if -- if he -- if he asks him if he has a

 8  financial interest in the case, that's sufficient.

 9  Whether or not there are entities above that that may be

10  loaning money to Packet Intelligence and whether or not

11  he owns those entities is -- is really irrelevant in my

12  opinion.

13                    THE COURT:  Well, I'm not going to -- I'm

14  not going to sanction a walk through corporate -- a

15  corporate directory here of this company as a subsidiary

16  of this company who's related to this company who's got

17  a loan from that company, I don't see any relevance to

18  that.

19                    I'm not going to, however, tie the

20  Defendants' hands to simply ask do you have a financial

21  interest in the outcome of the case.

22                    You can go further, but there -- I see no

23  reason to do it with name entities, with specific

24  locations.  If you want to make it clear that he may

25  have an interest in the outcome beyond his direct
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 1  relationship with his employer, Packet Intelligence, you

 2  can do that, but I don't want it to be because Packet is

 3  owned by this company, and then we go through 20 minutes

 4  of corporate structure just for that.

 5              MR. KRAEUTLER:  I'll -- I'll observe

 6  that, Your Honor.

 7              THE COURT:  It should be at a high level.

 8  And -- and without -- I see no reason to specify

 9  specific names of entities that will mean nothing to

10  this jury.

11              MR. KRAEUTLER:  I assume that I can ask

12  him his percentage ownership interest in the Plaintiff

13  itself?

14              MR. DAVIS:  I don't think that's

15  relevant, Your Honor.

16              THE COURT:  You can ask him if he owns a

17  portion of the Plaintiff, but we don't need to talk

18  about whether it's 1 percent or 99 percent.  Okay?

19              MR. KRAEUTLER:  Yes, Your Honor.

20              THE COURT:  All right.  Let's proceed.

21              (Bench conference concluded.)

22              THE COURT:  All right.  Let's proceed.

23       Q.   (By Mr. Kraeutler)  Mr. Brunell, there are

24  multiple layers of ownership of corporations above

25  Packet Intelligence; is that correct?
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 1        A.    There are two levels above Packet Intelligence
 2   LLC.
 3        Q.    And you have an ownership interest in the
 4   ultimate owner of the company?
 5        A.    I do.
 6        Q.    And in addition to that, the ultimate owner
 7   has lending relationships and at least one of those
 8   lenders has an interest in any money recovered from
 9   litigation?
10        A.    Yes, that's typical standard process.
11        Q.    And you have an ownership interest in that
12   lending organization?
13        A.    I'm the shareholder in that lending
14   organization.
15                  THE COURT:  Let's move on, Counsel.
16                  MR. KRAEUTLER:  I will, Your Honor.
17        Q.    (By Mr. Kraeutler)  Now, I -- before you --
18   before this case, you had no prior experience with the
19   RMON Working Group; is that correct?
20        A.    That's correct.
21        Q.    You had never heard of the RMON1 standard or
22   the RMON2 standard?
23        A.    I read them as part of the diligence process.
24        Q.    And you had never heard of TrackSessions?
25        A.    I read the specifications, that particular
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1 thing didn't stand out to me at all.

2   Q.   Before Packet Intelligence bought the Dietz

3 patents, you didn't arrange to meet with Mr. Dietz or to

4 speak with him?

5   A.   No, Dr. Rosenfeld vouching for Mr. Dietz was

6 sufficient, I trusted Dr. Rosenfeld very much.

7   Q.   And am I correct that Dr. Rosenfeld got a

8 finder's fee in this case and is entitled to 10 percent

9 of any proceeds?

10   A.   He is an economic participant.

11   Q.   Before Packet Intelligence bought the Dietz

12 patents, you didn't know anything about Mr. Dietz's

13 involvement in the RMON Working Group or TrackSessions?

14   A.   No.

15   Q.   In fact, you sued on these patents without

16 meeting with Mr. Dietz or speaking with him?

17   A.   Yes.

18   Q.   And the same is true of the other inventors?

19   A.   Yes, I relied on Dov Rosenfeld.

20   Q.   Am I correct that the Dietz patents originally

21 were owned by companies named Technically Elite and

22 Hi/Fn?

23   A.   Technically Elite, then Apptitude, then Hi/Fn,

24 then Exar, and then Packet Intelligence acquired the

25 portfolio from Exar. That's the chain of title.

 1   Q.   And do you know whether any of those companies

 2 marked any products with numbers of the asserted

 3 patents?

 4   A.   I'm not aware of that.

 5   Q.   There is a license agreement between Huawei

 6 and -- and Packet Intelligence. Does that license

 7 agreement contain any requirement that products covered

 8 by the patent claims be marked?

 9   A.   No, it does not.

10   Q.   There is a license agreement between Packet

11 Intelligence and Cisco. Am I correct that that license

12 agreement does not require that any of the products that

13 may be covered by claims be marked?

14   A.   It does not.

15   MR. KRAEUTLER: Pass the witness.

16   THE COURT: All right. Redirect?

17   MR. DAVIS: Yes, Your Honor.

18   REDIRECT EXAMINATION

19 BY MR. DAVIS:

20   Q.   Mr. Brunell, you were asked on cross about

21 whether or not you contacted NetScout before filing this

22 lawsuit. Are you required to content NetScout --

23 NetScout before filing a lawsuit?

24   A.   No.

25   Q.   Is contacting NetScout before filing a lawsuit

1 relevant to any of the issues in this case?

2   A.   It is not relevant.

3   Q.   Now, I believe you were asked on -- on direct

4 why you didn't approach NetScout before filing the

5 lawsuit, and I believe you said it was not feasible.

6   What did you mean by that?

7   A.   Well, a lot of times when you ask people to

8 take a license, they say they don't infringe, and they

9 don't want to pay. And there's also a risk they can

10 file a litigation against you and try and -- basically

11 what's called a declaratory judgment, and that puts a

12 little bit of a freeze on a relationship. So a lot of

13 times it's the current law -- the current legal

14 landscape is such that it's more practical to start with

15 a litigation.

16   MR. DAVIS: No further questions, Your

17 Honor.

18   THE COURT: All right. Further

19 cross-examination?

20   MR. KRAEUTLER: No, Your Honor.

21   THE COURT: All right. Mr. Brunell, you

22 may step down.

23   Plaintiff, call your next witness.

24   MR. DAVIS: Your Honor, at this time,

25 Plaintiff calls Dr. Almeroth to the stand, please.

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 1                    THE COURT:  All right.  If you'll come

 2  forward, Dr. Almeroth.  You've previously been sworn.

 3  You may have a seat on the witness stand.

 4                    All right.  Mr. Skiermont, you may

 5  proceed with your direct examination.

 6                    MR. SKIERMONT:  Thank you, Your Honor.

 7         KEVIN C. ALMEROTH, PH.D., PLAINTIFF'S WITNESS,

 8                        PREVIOUSLY SWORN

 9                       DIRECT EXAMINATION

10  BY MR. SKIERMONT:

11      Q.   Dr. Almeroth, will you please introduce

12  yourself to the jury?

13      A.   Sure.  My name is Kevin Christopher Almeroth.

14  I live in Santa Barbara, California.

15      Q.   And what is your role in this case?

16      A.   My role is to offer opinions about the

17  infringement -- first of all, about the infringement of

18  the NetScout products.

19      Q.   What do you do for a living, Dr. Almeroth?

20      A.   I'm a professor in the Department of Computer

21  Science at UC Santa Barbara.

22      Q.   Are you married?

23      A.   I am, for about eight years now.

24      Q.   And do you have any children?

25      A.   I do.  Everybody has children that are in high
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 1  school or graduated.  I have a four-and-a-half-year-old

 2  and a seven-year-old, so I'm still on the go.

 3       Q.   What were you asked to do as your assignment

 4  in this case?

 5       A.   I was asked to first look at the patents and

 6  understand the technology and the claims that are

 7  described in the patents, and then to look at NetScout's

 8  products and determine whether or not they infringed the

 9  patents and the claims at issue.

10       Q.   How are you compensated for your work?

11       A.   Hourly.

12       Q.   Does your compensation depend on the outcome?

13       A.   It does not.

14       Q.   Prior to being retained by Packet

15  Intelligence, Dr. Almeroth, did you know any of the

16  folks who work at Packet Intelligence?

17       A.   No, I did not.

18       Q.   You didn't know Mr. Brunell?

19       A.   I did not.

20       Q.   Not Mr. Vachon?

21       A.   No, sir.

22       Q.   And did you know any of the inventors in the

23  case before your involvement?

24       A.   I did not.

25       Q.   Did you know any of the lawyers in the case
```

 1 before your involvement?

 2   A.   I did not.

 3   Q.   Did you know anyone from NetScout before your

 4 involvement?

 5   A.   No, I don't think so.

 6   Q.   When you began your infringement analysis, Dr.

 7 Almeroth, did you start out leaning one way or the

 8 other?

 9   A.   No, no.

10   Q.   Did you prepare some presentation slides to

11 present to the jury during your testimony today?

12   A.   Yes, I did.

13   Q.   Would you please describe your educational

14 background?

15   A.   Sure. So the first demonstrative, No. 2, this

16 shows a little bit of my background. For my education,

17 I have a Bachelor's, a Master's, and a Ph.D., all in

18 computer science, and the dates are 1992, 1994, and

19 1997.

20   Q.   Did your studies in computer science have a

21 particular focus?

22   A.   They did. Ultimately, when I graduated with

23 my Ph.D., I wrote a dissertation about the delivery of

24 multimedia services in the Internet, things like audio

25 and video in large scale systems. So essentially

 1 systems for delivering rich content throughout the

 2 entire Internet.

 3   Q.   What did you do after receiving your Ph.D.?

 4   A.   I applied to a number of institutions. I

 5 wanted to teach and also to do research, and ultimately

 6 I landed in the Department of Computer Science at UCSB.

 7   Q.   How long have you been affiliated with the

 8 University of California Santa Barbara?

 9   A.   Since finishing my Ph.D. in 1997.

10   Q.   And did you receive tenure? Are you tenured

11 faculty?

12   A.   Yes, sir, I am.

13   Q.   And when did you receive tenure?

14   A.   I believe it was about 2005.

15   Q.   What do you do as a faculty member at the

16 university?

17   A.   I do really three things. I -- I teach, and I

18 also do research, and then also service to the field.

19   Q.   Can you explain some of the types of courses

20 you have taught?

21   A.   Sure. I teach both undergraduate and graduate

22 courses. I teach courses about how the Internet works,

23 the protocols that work in the Internet. We start off

24 that course talking about acronyms. And I can list

25 about a hundred acronyms, all relating to different

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 1  standards and protocols that work in the Internet.  And

 2  I promised the students that over the course of the

 3  quarter, we'll learn how those protocols work and

 4  through that understand how the Internet works.

 5       Q.   Have you taught any courses about networks or

 6  the technology that you've heard discussed so far at

 7  trial?

 8       A.   Yes, absolutely.

 9       Q.   What -- can you give us an example?

10       A.   The first course I teach are introduction to

11  networking.  It's the first in a three-course series,

12  goes through a lot of how the Internet works.  It talks

13  about all the different protocols and data and packets

14  and headers and sort of ad nauseam about the different

15  protocols and -- and technologies that exist in the

16  Internet.

17       Q.   And you've been here all day for -- during the

18  trial, correct, Dr. Almeroth?

19       A.   Yes, sir.

20       Q.   Aside from teaching, what other roles do you

21  have as a professor?

22       A.   The second one I mentioned was research.  And

23  here we try and move beyond what's already known.  We

24  try and develop new technologies.  And it really spans

25  two areas.  One, we try and develop new applications for
```

1 the use of the Internet.

2   One of the first projects I worked on as a

3 graduate student was to develop something very similar

4 to TiVo where you can sit at home and you can pause.

5 And our idea was to put some buffering in the set-top

6 box that you get from your cable company, and that would

7 store the video so you could pause and rewind and fast

8 forward. So we did that in about 1994.

9   So since then, we've been looking at how you

10 can use the Internet to do better and more sophisticated

11 things. And at the same time, under the Internet and

12 how it works, we've been looking at how to make it

13 faster, make it better, make it better able to support

14 different kinds of traffic so that users don't have to

15 wait as much, even though the applications are getting

16 more sophisticated.

17   Q.   When you perform the kind of research you have

18 described, does it result in anything?

19   A.   It does. Primarily, we do what are called

20 peer-reviewed publications. We submit to journals.

21 Sometimes you hear about an article that's published in

22 Nature or the Journal of Medicine for -- for doctors.

23 We -- we have our own set of journals. Some can be very

24 prestigious. Most people don't read them, except the

25 ones in the field. But we're very proud of when we can

 1 get a publication and show some of the things that we've

 2 developed or learned through our research.

 3   Q.   Does your research primarily involve other

 4 professors and students, or does it span beyond that?

 5   A.   No.   It spans beyond just my immediate

 6 collaborators.   One of the things I wanted to do when I

 7 started at UCSB was not just publish journal papers but

 8 to see the things that we were doing develop into actual

 9 products.   And so I have a demonstrative, the next one,

10 No. 3, that talks about some of the companies that we've

11 collaborated with.

12   And in a lot of these instances what we've

13 tried to do is to take the research and the things that

14 we've learned and partner with those companies so that

15 our ideas make it into the marketplace and basically try

16 and make society a -- a better place.

17   Q.   And on your industry collaborations, what is

18 the U.S. Air Force project?

19   A.   Right.   In connection with the U.S. Air Force

20 and the other branches of the military and Lockheed

21 Martin, which is just to the left of it.   I was asked to

22 work on a team to develop the Next-Generation Internet

23 for the military.   It was an extremely interesting and

24 advanced project, involved communication via satellites,

25 and then to ground elements that could be mobile on the

1 ground. It was supposed to be highly secure, support

2 things like many to many communication and audio and

3 video. And it -- it was particularly challenging

4 because the military not only fights wars but

5 participates in disaster recovery.

6   So you can imagine cities, some in Texas

7 recently, where much of the infrastructure is under

8 water. And so the military and the National Guard have

9 to come in and be able to set up and use a communication

10 infrastructure. And so figuring out the right network

11 protocols, figuring out the kinds of devices to use in

12 this network was a piece of work that I did. It was

13 actually part of a multibillion-dollar effort to advance

14 the state of the military's Internet infrastructure.

15   Q.   Are you a member of any professional

16 organizations?

17   A.   I am. There's two main ones, the Association

18 of Computing Machinery or the ACM. And the one that's

19 here at the bottom of the demonstrative, the Institute

20 of Electrical and Electronics Engineers.

21   Q.   How are your education and work experience

22 relevant to the test -- your testimony today?

23   A.   As -- as we've already heard today, and as

24 we'll continue to hear over the coming days, there are a

25 number of technologies and protocols on how the Internet

 1 works and the kind of monitoring of data and packets.

 2 All of those concepts, those terms, are deeply embedded

 3 in the courses that I teach and in the research that I

 4 do.

 5   Q.   Dr. Almeroth, have you -- before this case,

 6 have you ever conducted a patent infringement analysis?

 7   A.   Yes, sir, I have.

 8   Q.   How many times?

 9   A.   Probably a couple dozen times.

10   Q.   And have you ever testified in United States

11 District Court before?

12   A.   Yes, I have.

13   Q.   Have you received any special recognition for

14 your work?

15   A.   I have.

16   Q.   Can you describe that?

17   A.   Certainly. The -- the one on the screen here

18 is -- it's probably the one I'm most proud of, it's to

19 be recognized as an IEEE fellow. Each year the IEEE

20 conducts some of its members into what's called the

21 fellowship status, and that's for one-tenth of 1 percent

22 of the membership who have been recognized for

23 significant contributions to the field. And so I was

24 recognized for some of my work by the IEEE.

25   MR. SKIERMONT: Your Honor, I would like

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 1  to offer Dr. Almeroth as an expert witness skilled in

 2  the technology of the relevant network monitoring art.

 3               THE COURT:   Is there objection?

 4               MR. LYONS:   No, Your Honor.

 5               THE COURT:   The Court will recognize the

 6  witness as an expert in the designated fields.

 7               Proceed, Counsel.

 8               MR. SKIERMONT:   Thank you, Your Honor.

 9       Q.   (By Mr. Skiermont)  Dr. Almeroth -- Dr.

10  Almeroth, what specifically have you been asked to do in

11  this case?

12       A.   I have been asked to look at two of NetScout's

13  products and to determine whether or not they infringe

14  the asserted claims and the asserted patents held by

15  Packet Intelligence.

16       Q.   And did you reach opinions as to whether

17  NetScout's GeoProbe G10 and GeoBlade products infringe

18  the six asserted claims from Packet Intelligence's

19  patents?

20       A.   Yes, I did.

21       Q.   And what is your opinion?

22       A.   I have a demonstrative that summarizes what my

23  opinions are.  For the GeoProbe G10 and for the

24  GeoBlade, each of them, both of them infringe the six

25  asserted claims that are at issue in this trial.
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 1   Q.   Now, can you describe to the jury or can you

 2 explain to the jury how you came about your opinion and

 3 what methodology you used?

 4   A.   Certainly. I have another demonstrative on

 5 this. This describes my methodology. I consider my

 6 methodology to be very important. The first thing that

 7 I usually do is to take the patents, to understand what

 8 the technology is about, and then compare that to the

 9 information available about the accused -- or the

10 infringing products. So that would include things like

11 customer-facing documents that NetScout might publish

12 that users have access to. It also includes technical

13 documents, internal technical documents that go into the

14 details about how their system works. Including source

15 code, that's the machine instructions, the computer

16 programming, the actual instructions on the computer

17 itself that will tell me also how the products work.

18   There's also testimony from -- by deposition.

19 I think the Court has mentioned depositions and how it's

20 sworn testimony. Questions are asked of NetScout

21 employees, and I can look at that information, as well.

22 And then other court documents. There's expert reports.

23 There's what's called claim construction, which

24 describes how terms are defined. And other admissions

25 made by -- by both parties.

1   I take that whole collection of material and

2   then do analysis to determine whether or not the

3   limitations of the claims are met.

4   Q.   Can you describe before getting into the

5   infringement specifics generally the subject matter of

6   the Packet Intelligence patents?

7   A.   Sure.   I have a demonstrative on that, No. 6,

8   and it describes -- too far -- and it describes the

9   three patents that I think we've heard about so far

10   today.   I'm just going to call them by their last three

11   numbers, the '789, the '751, and the '725.

12   And generally, what they're about is

13   monitoring and classifying network traffic by examining

14   packets.   Looking at what's happening on a network by

15   looking at the data that's flowing back and forth on the

16   network.   Identifying the underlying protocols, the

17   applications that are being used, and the user activity

18   that's caused those packets to flow through the network

19   to try and achieve an understanding about how the

20   network is being used.   And that's providing detailed

21   information about the network.

22   Q.   Dr. Almeroth, can you describe in a little

23   more detail how networks and data packets and protocols

24   work as you just explained it?

25   A.   Yes, I can.   And I'll start off with a

1   demonstrative here that talks about a network device.

2   And -- and some of these parts of what I'm going to say

3   have been discussed by some of the other witnesses. But

4   it kind of puts my analysis into context and provides a

5   little bit more of a tutorial for -- for how things

6   work.

7   What I'm showing on this demonstrative is a

8   typical smartphone that might be used today. It's

9   running something like the Facebook application, and it

10 has different parts of -- of the web page or -- or app

11 that you can look at.

12   Q.   And can you describe what the -- how the

13 smartphone or the user device then interacts with a

14 network and how it relates to packets?

15   A.   Sure. There's two additional portions that I

16 want to show. The first is there's a series of servers

17 over here on the left side. You have the device over

18 here on the right side. It sends requests for

19 information. That -- those requests go somewhere, they

20 go over the network that's -- that's shown as a cloud

21 here, and then they reach servers. Servers hold

22 information. The servers will respond with that

23 information. It's delivered back over the network, and

24 then ultimately displayed on the user's device.

25   Q.   Can you describe what the -- what the outline

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 1  of a cloud there is in the middle of the slide?
 2       A.    Sure.   The next, Demonstrative No. 9, fills in
 3  a little bit more of the detail, and now I've replaced
 4  this cloud, this kind of amorphous thing where we don't
 5  know what's happening with a series of links and some
 6  boxes, which I'm going to call routers.  The links
 7  connect the routers together.  And when a user device
 8  sends -- sends requests for information, they flow
 9  through the links, they get routed by the routers based
10  on information in the request they're able to reach
11  particular destinations.  So you have the combination of
12  the user devices communicating over the network to a set
13  of servers to try and gather information.
14       Q.    And what happens when a -- the user device
15  sends a request to one or more of the servers on Slide
16  9?
17       A.    What happens is there is a request that's
18  sent.  I'm showing that as an envelope because I can
19  describe a little bit more about what's in that envelope
20  to try and make sense of the technology that I'm talking
21  about.
22       Q.    And so the -- the -- the envelope that you
23  have is -- is a representation of a packet?
24       A.    It is.
25       Q.    And can you explain the packets that travel
```

1 over data networks in some more detail?

2   A.   Yes.   I'm going to use an analogy of the

3 postal service. I think some of the other analogies

4 used today, I think I heard one about the sewer system.

5 I think I'm going to stick with the post office. It

6 seems to fit with the way I describe it.

7   And what you see here is an envelope, the

8 contents, the data is like the letter or whatever goes

9 into the packet. On the outside of the letter, which is

10 the envelope, you have an address, so it's addressed to

11 me here in the courtroom. And the headers on the

12 outside of the envelope, there are headers when data is

13 delivered through the network. So the address

14 information, there's address information on the outside

15 of packets that tell Internet routers where to send that

16 packet.

17   And they do so using protocols. I think one

18 of the other witnesses defined what a protocol is.

19 Generally, it's a set of rules that help everyone

20 understand the way communication should take place.

21 There's protocols for the U.S. mail, where the address

22 goes, the fact that the name is first, zip codes are

23 five numbers, nine numbers, states are two-letter

24 abbreviations. The postage goes in the upper right.

25 All of those rules that we don't always think about all

1 the time are the descriptions of the standard protocol

2 definitions for how to communicate using letters in the

3 U.S. mail.

4   And because we have data packets in the

5 Internet and they have headers and those headers adhere

6 to standards, we can look at those packets going through

7 the network, analyze those protocol headers, look at

8 where they're going, where they're coming from, and

9 start to -- the first steps towards understanding what's

10 happening in the Internet.

11   Q.   Dr. Almeroth, how does the address on an

12 envelope, as you've described it, relate to protocols on

13 a network?

14   A.   It's similar in the sense that the information

15 on the outside of an envelope is -- there's also

16 information in packets that do the same thing. We use

17 addresses for servers, not quite city, state, and zip

18 code, but something very similar so that when packets

19 flow through the Internet, the router can act like a

20 post office and direct the packets along certain links

21 so that they reach other routers and then ultimately to

22 the destination server.

23   Q.   And so how does the envelope arrive at its

24 destination that's on Slide 11?

25   A.   So I have a couple more demonstratives here

 1 that show this. So if we looked at this letter, you

 2 would use part of the header to find Marshall, Texas.

 3   The next thing that you would do is to use the

 4 street address and number to find the courthouse, and

 5 then you would find me sitting in the witness chair

 6 based on Dr. Almeroth. So just like in the -- in the

 7 postal service, there are -- you use the same kind of

 8 information and data packets to be able to route packets

 9 through the Internet.

10   Q.   And do the protocols of a packet have the same

11 layering as the envelope analogy that you've just

12 described?

13   A.   They do. They have similar layering. A

14 couple more demonstratives, the first one, No. 14, that

15 shows on the left side the envelope and the packet

16 header. Then on the right side is a little more of the

17 way that it works in the Internet.

18   You have a combination of headers associated

19 with protocols that are all working together. And this

20 is sort of where maybe I stop speaking English and then

21 just start speaking acronyms, but you have HTTP, which

22 is a protocol for the web; TCP or UDP that helps deliver

23 data from one end of the Internet to the other; then IP;

24 and then protocols like Ethernet or WiFi.

25   In the Internet, all of those protocols work

1 together to be able to get your packets from where you

2 send them as a request -- for example, on your

3 smartphone -- across the network, the Internet, to the

4 destination, and then the inverse, to send that data

5 back across the Internet so that it can be displayed on

6 your device.

7   The -- the next -- quickly, the next slide

8 sort of shows that piece. Each of these devices have

9 what's called a protocol stack, just because they're

10 represented from top to bottom. And then they flow from

11 user devices to servers and back again.

12   Probably one last piece is when we see this

13 data sent over the Internet, it's organized

14 sequentially. So you'll have the HTTP header on the

15 inside. That's like the letter in the envelope. And

16 then inside of TCP and UDP, that's almost like the next

17 layer of the envelope. And then inside of another

18 envelope, inside of another envelope.

19   So it's a little bit different in the way that

20 the Internet works, but the -- the analogy of having

21 layers, different parts of the address still generally

22 fits in the context of the Internet.

23   Q.   Now, the packets you've described, can you

24 explain how the data packets would travel on a network

25 when you try to access Facebook on your phone, for

```
 1  example?
 2       A.    Okay.  So I think I can bring all this home.
 3  I've got an animation on the next demonstrative that
 4  shows the user device.  It shows the Facebook server, an
 5  Amazon server, and a YETI server.  And what a user wants
 6  to do is they pull up the Facebook app, and they want to
 7  display information that's in their feed.  The first
 8  thing that will happen is there will be an envelope
 9  that's generated as a request.  That gets sent across
10  the network, and then data packets will flow.  That
11  comes back and fills in a portion of the Facebook app.
12            Let me just back up and show that again
13  because it goes through very quickly.  A request and
14  then a series of responses that come back.
15            I have that labeled as what's called a
16  connection flow.  It's kind of one sequence of -- of
17  requests and responses.  It can involve multiple
18  requests over the same connection, and that's generally
19  a single connection flow.
20            Now, when Facebook gets that response and
21  fills in the structure of the Facebook page, it then has
22  to send off another series of requests, more than one
23  request, to fill in additional pieces of the page.
24            Why does it have to do that?  Because there's
25  video that might be displayed.  There's ads that might
```

1 be displayed. The ads would come from Amazon. If you

2 visit the YETI homepage, that content or an ad for YETI

3 might come from that server.

4   So what you may not have realized is that when

5 you open an app, data from all over the Internet from

6 multiple servers all get requested and show up on your

7 device.

8   So the next step of the animation is to show

9 the next set of multiple requests that go. So multiple

10 requests to a set of individual servers. And then you

11 can see that the different pieces now load into the

12 Facebook app. And you see that through a combination of

13 those requests.

14   Q.   And on your example, Dr. Almeroth, the packets

15 that were exchanged between the phone and the Amazon

16 server is what populated the Amazon ad that appears on

17 the user device after the packet's returned?

18   A.   That's correct.

19   Q.   Is this process that you've just illustrated

20 happening all the time on the Internet?

21   A.   It is. I mean, there's lots of requests. You

22 know, sometimes to load the Facebook app, it can take 20

23 requests. You can get the responses back. It's not

24 just one phone, it's dozens or hundreds of phones. It's

25 not just one set of phones in one area connected to one

1 cell tower. It's millions of computers across the

2 Internet. Millions or billions of packets per second

3 flowing across the network.

4   You can think about how much mail the post

5 office processes. This is an order of magnitude even

6 faster. It's not just delivery of mail once or twice a

7 day. It's packets being delivered every single second,

8 all day, all night long.

9   Q.   Dr. Almeroth, did the patents involved in this

10 case that you've reviewed address the issues you just

11 discussed about data traffic?

12   A.   Yes, they did.

13   Q.   And how did the patent -- patents that you

14 analyzed primarily address these issues?

15   A.   So I have the next demonstrative here, which

16 shows the face of the '789 patent, that's PTX-9, and

17 I've pulled out some of the quotes from the background

18 of the invention. And those are located at Column 1,

19 Lines 53 through 67, Column 2, Lines 33 through 37, 42

20 through 56, and then Column 3, Lines 45 through 41. And

21 I've highlighted some of the relevant text. It talks

22 about how there's a need for activity monitors, things

23 that can monitor packets.

24   This need has become especially acute. It was

25 especially acute in 1999 when part of the specification

 1 was written. It talks about how the growth of networks

 2 are continuing. It's becoming increasingly important to

 3 monitor the use of those services and to rate them

 4 accordingly.

 5   It also talks about how information about

 6 services, like applications, Facebook or other

 7 applications that exist, that it's important to

 8 understand who's using them, how often they've been

 9 accessed, for how long, and that information is useful

10 for the maintenance and continued operation of the

11 network.

12   Clearly, the Internet doesn't just run

13 automatically. Sometimes it gets overloaded. Sometimes

14 it breaks. Sometimes it's about to break and starts to

15 slow down. And there's a whole industry of people whose

16 responsibility it is to ensure that the network stays up

17 and operational.

18   And part of why it's important for them to

19 have this kind of information is for the Internet

20 service providers to be able to measure and analyze

21 their networks.

22   What activity is happening? Is it more than

23 anticipated? Is there a certain application that's come

24 out that's causing congestion? All of that is

25 information that's very important in the context of

1 these patents and the technology I'm talking about.

2   Q.   So after setting out the background of the

3 invention that you just walked through, how did the

4 inventors go about addressing these issues of larger

5 networks and getting additional information about

6 application programs?

7   A.   In -- so let's go back to the demonstrative

8 that shows the animation, and I can show this again.

9   So for all of the packets flowing, what the

10 inventors described in the specification was being able

11 to analyze data on a packet level, to look at the

12 headers in the packets, to be able to look at the

13 packets as they can be combined into a flow.

14   And then also, we started to hear this term

15 over the course of the morning where those flows can be

16 aggregated into what's called a conversational flow.

17   And so I have a -- I've added that term here

18 to represent the collection of flows that are related to

19 each other. So not just looking at the packet level or

20 just at the flow level, but looking at being able to

21 understand the traffic from the perspective of a

22 conversational flow.

23   Q.   And we've -- how would a packet monitor or a

24 network monitor that we've heard about today fit into

25 the network you've just then shown the jury?

```
 1        A.    One of the places that you could put such a
 2  monitor was on a link like this one.  And a link there,
 3  if you had a packet monitor, it would see the packets
 4  that were flowing across the network.  You would be able
 5  to look at those packets and see what information was in
 6  those packets and go through the steps of processing the
 7  data to try and understand what's happening.
 8        Q.    The -- let's talk about the patent claims,
 9  transition to those.
10             Have you prepared a slide that -- that you can
11  walk the jury through to show a claim -- one of the
12  asserted claims in the lawsuit?
13        A.    Yes, I have.  The next demonstrative, No.
14  22 -- oh, I'm sorry.  Let's do it this way, Slide 23 has
15  the '789 patent, again, and it shows Claim 19 from the
16  '789 patent, one of the asserted claims, and you see a
17  fair number of words there.  This is the entire claim,
18  and so I can walk through sort of what some of the parts
19  of that claim are to give you a sense of what the claim
20  is trying to accomplish.
21        Q.    Starting with the preamble, which is the first
22  paragraph of Claim 19 of the '789 patent, can you
23  describe what the inventors were claiming as their
24  invention?
25        A.    Sure.  That language says:  A packet monitor
```

1 for examining packets passing through a connection point

2 on a computer network, each packet conforming to one or

3 more protocols, the monitor comprising.

4   And then there's an additional set of

5 limitations.

6   Q.   And what -- did the inventors explain the

7 various elements of their invention or -- or provide

8 examples of their inventions in places other than the

9 claims?

10   A.   They did. So I have a series of

11 demonstratives that walk through the claim. And the

12 first one, No. 24, takes that preamble, the first part

13 of Claim 19, and shows a packet monitor, which I've

14 talked about a little bit, and packets.

15   The idea that you're looking at a connection

16 point on a computer, protocols I've mentioned a little

17 bit. And then there are figures and text in the patent

18 that provide a teaching to a person who's reading the

19 patent on -- on what those terms mean and how you could

20 implement some of that technology.

21   So if you look at Figure 1, I've highlighted

22 in orange this data communication network, the packet

23 monitor in green is this analyzer up here.

24   And then in Figure 14, you have the -- the

25 whole packet monitor is that figure, and it identifies a

 1 flowchart of what steps the -- the patent describes, and

 2 they're similar to what's required in the claim.

 3   Q.   With respect to the next element, 19(a) of the

 4 '789 patent, can you describe what the inventors were

 5 claiming in 19(a)?

 6   A.   Sure. 19(a) describes the packet acquisition

 7 device it's coupled to the connection point configured

 8 to receive packets passing through the connection point.

 9 It's pretty similar to some aspects of the preamble.

10   But, again, packets -- and you want to be able

11 to monitor them from a connection point, and there's

12 additional figures that describe what that connection

13 point would look like.

14   Q.   And what -- what about with respect to the

15 next element of this exemplary claim, Element 19(c)?

16   A.   19(b).

17   Q.   19(b). I'm sorry, I misspoke.

18   A.   This is an input buffer memory. It says it's

19 coupled to and configured to accept a packet. As you're

20 observing these packets that come across the network,

21 you need a copy of the data to put it through the

22 analyzer. And so this second limitation identifies a

23 buffer memory that's needed to do that. And, again,

24 it's shown in the figures.

25   Q.   Can you describe the figure Element 19(c) of

1 the '789 patent?

2   A.   19(c) talks about a parser subsystem. And the

3 idea of the parser subsystem is to process the data, to

4 parse it into pieces so that it can be divided into the

5 different protocols. And it's -- it's one of the -- the

6 steps of the analysis that has to take place. Again,

7 supported by and described in detail in the

8 specification.

9   Q.   And there are a few additional components to

10 Claim 19 of the '789 patent. Can you walk through those

11 with respect to how the patent is described in the

12 figures?

13   A.   Yes, 19(d) is a memory for storing a database

14 comprising none or more flow-entries for previously

15 encountered conversational flows.

16   So here you have a database of flow-entries.

17 It's for previously encountered conversational flows.

18 And the idea will be that you're keeping track of not

19 only the connection flows but also the conversational

20 flows. And you do that by keeping a copy of them in the

21 memory.

22   Now, what the next limitation, (e), describes

23 is a look-up engine, it's part of the parser subsystem.

24 And what the language is describing is that when packets

25 come in you try and see if it's part of an existing

1 flow.   If it's part of an existing flow, can you update

2 information about that flow.   If it's part of -- so

3 that's the next limitation.

4   A flow insertion engine, so if it's part of an

5 existing flow, it goes into that flow.

6   If it's for a new flow, it's for packets that

7 aren't part of any previously existing flow, then you

8 have to create a new entry in the database.   And so

9 that's also included in limitation (g) or the second

10 part of (f), if the packet is for a new flow.

11   Again, the idea is the packets come in,

12 they're parsed, and you try and associate it with a

13 particular flow.   And then there's additional

14 information that can associate those flows into a

15 conversational flow.

16   And then the last part, there's what's called

17 a wherein clause.   The operation of the parser subsystem

18 depends on one or more protocols.   So that means that

19 the thing that you're parsing are the packets, and you

20 have these protocols, HTTP, TCP/IP, things like that.

21   Q.   Now, Dr. Almeroth, when you walked through

22 that, the -- the components of Claim 19 of the '789

23 patent with the patent figures, to -- to -- to have

24 infringement, does the NetScout product have to look

25 just like the patent drawings?

 1   A.   No, not -- not just like. It -- it does have

 2 to meet the limitations, but not exactly like the

 3 figures that are in the specification.

 4   Q.   Can you tell -- explain to the jury what you

 5 understand from your review of the patents and the other

 6 documents in this case, what the benefits of the claimed

 7 invention are?

 8   A.   Certainly. The next demonstrative, No. 33,

 9 identifies some of what those benefits are. You get

10 traffic classification, so you start to understand what

11 the flows are, what the applications, what the uses are.

12 There's a second for quality of service.

13   Back to the mail analogy, if you think about

14 how there are some letters that you can send through the

15 postal service that are ensured, return receipt

16 requested, expedited, that means you can treat some

17 letters with a different quality with faster or better

18 service for which you pay more for.

19   The same thing in the Internet. For streaming

20 video, you can pay extra for certain services. And part

21 of enforcing those quality restrictions, you need to be

22 able to understand what packets are associated with

23 higher quality connections or conversations and which

24 might be lower quality.

25   There's also network security. Obviously,

1 network security is something that's become very

2 important recently. There's a lot of attempts by people

3 who have devices on the Internet who aren't supposed to

4 be accessing servers and aren't supposed to be accessing

5 your personal information, but they -- they do and they

6 try. So part of protecting networks from intrusion

7 attacks from people trying to get into servers is -- is

8 understanding what the traffic is that's coming over a

9 network. And so being able to classify it, there are

10 certain kinds of attacks that have what are called

11 signatures that when an attack is starting to happen,

12 there will be certain kinds of packets that you can look

13 at or certain patterns.

14   And so based on traffic classification, that's

15 the kind of benefit that you can get from some of the

16 technology in the patent.

17   Q.   Dr. Almeroth, can you quantify for the jury or

18 describe in -- in numbers or percentages your opinion

19 with respect to how valuable the traffic classification

20 aspect of the inventions disclosed in the patents are?

21   A.   Yes. I have a demonstrative, No. 34, and

22 there are publications that describe the kinds of packet

23 classification where you do what's called deep packet

24 inspection where you're looking at the contents of

25 packets and you're correlating those packets into flows

1 and into conversations.

2   And this top paragraph is from one of those

3 documents that describes that best of breed solutions,

4 that for leaders in the field who are doing this kind of

5 packet inspection, that they're able to positively

6 identify at least 90 percent of traffic and what

7 applications and uses it's associated with. And it's

8 better than 90 percent. In some cases, it's 95 percent

9 or higher.

10   The idea then of being able to use the

11 patented technology and looking at packets, at flows,

12 and at conversations, that it's that kind of technology

13 that facilitates the increase in classification that

14 gets you up to that higher tier, that 90 to 95 percent

15 classification capability.

16   Q.   How did you go about applying the knowledge of

17 the patents that you walk through -- for instance, with

18 Claim 19 in the figures -- to the task of whether or not

19 the NetScout products infringe?

20   A.   Okay. This is back to the methodology that I

21 described earlier, and the idea here is with an

22 understanding of the patents and the claims at issue and

23 looking at the limitations in the parts of the claims, I

24 wanted to compare those against the infringing products,

25 the G10 and the GeoBlade, and ensure or check that each

1 one of the limitations was met by those products.

2   And I used the information that I described

3 earlier. I used the -- the testimony from the

4 witnesses. I used the public documents from NetScout,

5 the internal documents that talk about the details of

6 these products, and then also the source code. And

7 using all of that information, I was able to -- to reach

8 my conclusions.

9   Q.   Dr. Almeroth, when you were walking through

10 Claim 19, we saw a lot of words broken up into

11 paragraphs. Were there particular words in the claims

12 that you had to apply a definition from somewhere

13 outside the claim?

14   A.   Yes.

15   Q.   Can you -- can you describe that for the jury?

16   A.   Sure. So for some of the claim terms there is

17 a process that the Court and the parties go through to

18 define meanings for what those terms mean. And

19 ultimately the Court issues a ruling as to what those

20 terms mean. It's called claim construction,

21 construction meaning how the terms are defined.

22   And on this demonstrative, you see claim

23 construction terms for flow-entry database, parser

24 record, conversational flow or flows,

25 conversational-flow sequence, and child protocol. And

 1 the Court has issued definitions as to what those terms

 2 mean, and I've used those definitions throughout my

 3 analysis.

 4   Q.   And -- and, Dr. Almeroth, you did apply those

 5 constructions that you just walked through for those

 6 terms throughout your analysis of the -- when you

 7 assessed infringement; is that correct?

 8   A.   Yes.

 9   Q.   And I think you mentioned when you were

10 describing your methodology a patent file history?

11   A.   Yes.

12   Q.   What is that?

13   A.   As -- as part of getting a patent and when it

14 goes to the Patent Office for review, the application in

15 the correspondence goes into what's called a file

16 history or a file wrapper. That's all of the

17 information that's exchanged between the inventor or

18 their -- their lawyer and the Patent Office. And so

19 I've reviewed all of that material, as well, as part of

20 forming my opinions.

21   Q.   So you reviewed the correspondence between the

22 applicant and the Patent Office that occurred in the

23 lead-up to the issuance of the patent?

24   A.   Yes, sir.

25   Q.   Did you use any -- when you were conducting

1 your analysis and applying the claims to the product for

2 an infringement analysis, did -- did you use any

3 particular viewpoint in conduct -- conducting that

4 analysis?

5   A.   I did. In patent terminology -- excuse me,

6 there's the concept of a person of ordinary skill in the

7 art. And I have a demonstrative, No. 37, that describes

8 some of the qualifications of that person.

9   It's not a person who is an expert or who has

10 a Ph.D. or a lot of training. For a technical patent of

11 this nature, they do have some specialized training, and

12 you use this definition to look at the specific --

13 specification and the claims and the patents through

14 their eyes, kind of this hypothetical person and their

15 level of training to understand what the patent terms

16 mean.

17   And so the person of ordinary skill in the art

18 that I used for these patents was somebody with a

19 Bachelor's degree in computer science or an equivalent

20 degree, and then also several years of experience in the

21 field of network monitoring technology.

22   Q.   Now, you -- you mentioned a couple of times

23 the specification of the patent. Can you just explain

24 to the jury what part of the patent is the

25 specification?

1   A.   Sure.   So the specification is all of the

2 figures and the text after the figures that describe the

3 background and describe the invention.   And then that's

4 followed by the claims.   And the claims define the

5 invention that's being covered.   I think it -- the

6 analogy that was used earlier was with sort of the

7 boundaries for a piece of property.   So the claims set

8 forth what the boundaries of that property are.

9   So if you do all of the limitations and

10 practice all of those limitations, then you're within

11 the bounds, and you're infringing on the particular

12 claim.

13   Q.   Returning to this person of ordinary skill

14 that you described, is this a real person you have in

15 mind?

16   A.   No, it's -- it's a hypothetical person, just

17 to get a sense of what that person's training would be,

18 kind of their perspective in looking at the patent and

19 the technology that it describes.

20   Q.   Can you describe briefly, Dr. Almeroth, the

21 products that you were asked to analyze to determine

22 whether they infringed the asserted claims of PI's

23 patents?

24   A.   Yes.   I have a demonstrative that shows the

25 pictures of the two accused products that I performed my

 1 analysis on to determine infringement.

 2   The first was the GeoProbe G10, and the second

 3 was the GeoBlade.

 4   The G10 is -- is about this wide. It's about

 5 this high. And then it's about this deep. It goes into

 6 a big rack of equipment in a data center. You see on

 7 the edges here it has screw holes so it can be bolted

 8 into a cabinet.

 9   And then on the front what you see is a number

10 of network connections, and those network connections

11 can connect into the network. And it's via those

12 connections that they're able to receive packets from

13 the network.

14   And then once a packet is received, it's the

15 internals of one of these devices, the chips and the

16 hardware and the components and the source code, that

17 all the -- determine what to do with -- with those

18 packets.

19   The GeoBlade on the right is about three to

20 four times as high as the G10, and it's a more

21 sophisticated piece of equipment designed to handle

22 higher speeds. And if you're handling higher-speed

23 connections, that means many more packets per second,

24 potentially many more flows and conversational flows,

25 and so you need the additional processing capacity, and

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 1  that requires a -- a bigger box.
 2      Q.   A moment ago, Dr. Almeroth, you walked through
 3  Claim 19 of the '789 patent from the perspective of the
 4  invention.
 5           Did you apply the methodology you described
 6  earlier to analyze whether the G10 infringes Claim 19?
 7      A.   Yes, I did.
 8      Q.   And can you -- starting with the first part of
 9  the claim, 19, of the '789 patent, can you describe --
10  walk through the analysis for that first part of the
11  claim, the preamble, and describe what you found for
12  infringement?
13      A.   Certainly.  So this Demonstrative 39 shows
14  Claim 19.  What I've done is divided it up into a series
15  of limitations.  There's some room on the right side.
16  I'm going to describe some of the evidence I relied on
17  to determine whether or not that limitation was met.
18  And then if it was, then I will be able to -- to put a
19  check box in that box.
20           So for the preamble of Claim 19, what I looked
21  at is some of the evidence was PTX-166.  This is a
22  GeoProbe G10 document that describes the functionality
23  of what the -- the G10 can do.  It says here on the --
24  the face of that document that it serves as a primary
25  collection and correlation agent for Tektronix
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 1  Communications' Network Intelligence solution.  So

 2  that's one of the pieces of evidence that I relied on in

 3  forming my opinion.

 4           There's a second piece of evidence on the next

 5  demonstrative.  This is also from PTX-166, that same

 6  document, but now on Page 2 where it talks about how the

 7  G10 is comprised of purpose-specific connection,

 8  processing and application boards, and it also supports

 9  eight physical Ethernet connections, 10 gig -- or 10G or

10  1G, that stands for 10 gigabits per second, that's

11  pretty fast.  But it describes that this device can

12  connect and receive packets and then process and analyze

13  those packets.

14       Q.   Based on the analysis you conducted in this

15  case, what is your conclusion with respect to -- I

16  should say what is your opinion with respect to whether

17  the G10 has the elements -- the element described in the

18  preamble of Claim 99?

19       A.   Based on my analysis, including the -- some of

20  the evidence that I reviewed here, as well as additional

21  evidence that this limitation was met by the G10.

22       Q.   Element 19 -- Element (a) of Claim 19 is a

23  packet acquisition device coupled to the connection

24  point and configured to receive packets passing through

25  the connection point.  What is your opinion with respect
```

1 to whether the G10 has the claim Element (a) present?

2   A.   It does have it present, and I looked at a set

3 of evidence. It's very similar to the evidence I looked

4 at for the preamble of Claim 19. It, again, is this

5 same PTX-166 on Page 2. I specifically called out the

6 Ethernet connections that allowed the G10 to receive

7 packets, and that's exactly what the -- the limitation

8 of Claim 19(a) requires.

9   Q.   And so can -- in your opinion, can you put a

10 check next to the 19(a) element?

11   A.   I could. I do have some additional evidence

12 that I also relied on.

13   Q.   Don't put the check yet then.

14   A.   Okay. That's -- on the next demonstrative,

15 there's a G10 installation guide, which is PTX-228. And

16 on Page 56 of that document, there's a picture of the

17 G10 with eight 1 gig Ethernet ports. That, also, is

18 additional evidence that shows that it's a packet --

19 packet acquisition device and meets all of the words of

20 19(a).

21   The final piece of evidence I want to present

22 is from deposition testimony. So this is sworn

23 testimony from NetScout's corporate representative,

24 Mr. John Curtin, and he was asked questions under oath.

25 And so he was asked whether the -- the G10 is a probe?

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 1              He said yes, it was a probe.

 2              And what do probes do?

 3              It consumes packets, it does session records,

 4  flow records, and KPIs, or key performance indicators.

 5              So based on the documents and the testimony

 6  for this limitation and the other evidence that I found,

 7  I believed that it was met.

 8         Q.   And so you can put a check next to 19(a)?

 9         A.   Yes, sir.

10         Q.   Moving to Element 19(b) that addresses the

11  input buffer memory coupled to and configured to accept

12  a packet, have you also done the same methodology, and

13  -- and you have some evidence to present for the G10

14  with respect to that claim element?

15         A.   Yes.  For 19(b) and the requirements there,

16  the first document I looked at was PTX-170.  It's

17  entitled the NGIC-Classification-ASD.  So this is more

18  of an internal-facing document, and it describes the

19  purpose of this document.  It's talking about sort of

20  the components of the interface card.  There's something

21  called the EzChip for the avenger or the intruder.  And

22  it talks about the additional characteristics on the

23  inside of the device.

24              If we then turn to Page 2 of this document,

25  there's a figure that's shown here.  It's a little hard
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 1 to see, but I have an additional demonstrative that

 2 blows up that figure, PTX-170, Page 2. And what I've

 3 highlighted here is something called the flow memory.

 4 So that memory is an input buffer, and it meets the

 5 words and the requirements of limitation 19(b).

 6   There's one last piece of evidence, then, that

 7 I -- I wanted to rely on here, as well. And, again,

 8 this is deposition testimony from Mr. Curtin from

 9 NetScout, and he was asked about that particular frame

10 memory portion that I showed you in the previous

11 document. And he confirmed this is the memory that the

12 packet is kept in, that the frame, in this case the

13 packet, is kept in. So based on the evidence that I

14 reviewed, including what I've presented so far, I

15 determined that this limitation was met.

16   Q.   And so you'll put a check there?

17   A.   Yes, sir.

18   Q.   Let's move to Claim Element 19(c), which is

19 the element that refers to the parser subsystem,

20 including a slicer and the parser record.

21   A.   Yes.

22   Q.   What evidence did you consider with respect to

23 Element 19(c)?

24   A.   Certainly. There's a fair amount of evidence

25 here, so I'll try and break it into pieces. I'm not

1 going to go through the claim language again, but I do

2 know that the parser subsystem describes a slicer in the

3 patent, which is PTX-9 at Lines 6 (sic), Lines 20

4 through 22, it describes what a slicer is. It describes

5 important packet elements from the packet.

6   And as I described earlier with respect to

7 this limitation, it's about getting data out of the

8 packets and associating it with different protocol

9 headers. So the first document that I relied on here

10 was PTX-279 on Page 1, it's a document about porting the

11 EzChip functionality. And it talks about here the

12 EzChip scans through a packet identifying the position

13 and length of various headers, extracting useful

14 information, and checking for errors. And that's

15 exactly what the claim requires.

16   An additional document that I reviewed, as

17 well, is from this PTX-170 that I just included -- let's

18 see -- sorry -- deposition testimony from Mr. Curtin.

19 There's something called an extended description, and

20 the extended description happens as a result of

21 processing -- or of parsing.

22   And in response to a question that Mr. Curtin

23 was asked, the extended packet descriptor contains

24 fields and/or values produced by the EzChip.

25   And then that goes on to the next step of the

1 processing that I'll talk about in a second.

2   The next slide describes the -- what I was

3 thinking of from PTX-170. This was the figure that I

4 had shown previously. And right below that figure I've

5 blown up a portion called TOPparse. TOPparse then is a

6 functionality that's implemented in the source code that

7 executes the instructions. So there's documents

8 describing the source code and the functionality. It's

9 exactly describing what's required of limitation 19(c).

10 And so I looked at that source code, as well. So I have

11 a demonstrative on that.

12   This is an example of the source code. It's

13 the front page. The source code has been labeled

14 PTX-173, it's Page 1, and there's comments at the very

15 beginning of this file that say that TOPparse is an

16 implementation for the 8x1G Avenger. And that TOPparse

17 implements the parsing functionality in the source code

18 that's required by limitation 19(c).

19   Q.   And so for the evidence that you just walked

20 through for 19(c), all of that evidence was -- were

21 NetScout internal documents, including source code of

22 the G10; is that correct?

23   A.   Yes, sir, that's correct.

24   Q.   And so you can check a box for Element 19(c);

25 is that correct?

1   A.   Yes.

2   Q.   Let's move on to Claim Element 19(d), which is

3   a memory for storing a database comprising none or more

4   flow-entries for previously encountered conversational

5   flows, each flow-entry identified by identifying

6   information stored in the flow-entry.

7   And I understand that you have -- well, let's

8   walk through this one, and if you would start with your

9   analysis of the -- of the Cavium chip and the flow state

10 block in the G10.

11   A.   Yes. Let me go through that portion first.

12 There's a document PTX-267. This is the title of it.

13 It's the G10 and GeoBlade Overview. And included in

14 this document on Page 2 is some of the functionality

15 I've been describing so far for the G10. It includes

16 the EzChip which I had identified as part of the parser

17 subsystem. But now the part that I want to point to

18 is -- is this thing called the Cavium, and that performs

19 some of the functionality that's related here.

20   Now, within the Cavium, there is something

21 called a flow record or an FR. And the flow record

22 includes information about the flows. And once you've

23 done the parsing, you're now in the part of the device

24 where you're actually constructing that into flow

25 records.

```
 1              There's another -- Page 16 of this same

 2  document, here's the underlying document back here.

 3  Then I've blown up a portion of it to show you.  This is

 4  for the G10.  Down here is the description.  And then

 5  this figure here, it says FSB, and that stands for flow

 6  state block.  That's the portion of the memory where the

 7  database is stored that contains the flow-entries.

 8  There's corresponding source code for this called Fsb.c,

 9  and that defines the source code in the computer that's

10  used to -- to then track flows.

11       Q.   And with respect to Slide 63, PTX-198, what

12  you've highlighted there is that Fsb.c defines flow

13  state block that is used to track flows, correct?

14       A.   That's correct.  So that's the -- the front

15  page.  That's a comment that describes the file.  This

16  file is -- is a couple hundred pages long of detailed

17  computer instructions.  And I've reviewed that source

18  code in reaching my opinions, and I'm just showing you

19  what that source code is, what the face of that document

20  looks like.

21       Q.   And did you consider additional source code

22  and information about the G10's flow records with

23  respect to Element 19(d)?

24       A.   I did.  The next set of evidence that I looked

25  at was -- was trying to understand what information was
```

 1 stored in that flow state block. And on Demonstrative

 2 64, I have a call-out from PTX-223 on Pages 3 and 4.

 3 This is a document called a flow records format. And

 4 what you can see here is that there's a whole number of

 5 fields that get associated with a particular flow-entry.

 6 It's two dozen or three dozen fields.

 7   There's also a portion down here at the bottom

 8 called the variable length extension data. And then

 9 there are additional pages of this document that then

10 describe some of the extensions so that these flow

11 records are quite lengthy. It includes a lot of

12 information about what's inside of a flow.

13   If we look at one of the examples, there's

14 something called an ID4, an information elements

15 extension, and I've tried to blow this up a little bit.

16 And it shows for certain flows that use the HTTP

17 protocol, which is one of the protocols used with

18 Facebook, that there's information in that block, like

19 the HTT refer, the URL, the agent that provides yet

20 another set of additional information.

21   And the requirement of the claim is to have a

22 memory for storing a database comprising none or more

23 flow-entries. So I've shown what the flow-entries are.

24 It says then for previously encountered conversional

25 flows. And I've shown you some of the information in

1 the flow record that can be used to correlate or

2 associate flow-entries into conversational flows.

3   Q.   And in addition to the Cavium chip and the

4 flow state block and the code and the -- and the records

5 that you just walked through, is there another set of

6 materials that you looked at with respect to Claim

7 Element 19(d)?

8   A.   Yes.   I've said that these entries, as part of

9 the flow state block, can be used to associate

10 flow-entries for previously encountered conversational

11 flows.   And I can show you an example of where NetScout

12 has then taken this information.   It's this information

13 that's sufficient to meet the limitation, but I have an

14 example of where they use that information to produce

15 what's called a key performance index.

16   So if look at -- or I have a demonstrative,

17 PTX-280, there's a white paper that NetScout has called

18 Subscriber Web Page Download Time Estimation in Passive

19 Monitoring Systems.   It's sort of a mouthful, but what

20 they're trying to estimate is from the time that your

21 computer makes a first request to Facebook, getting all

22 that data back, making all of the other requests, and

23 getting all of the other data back -- so from the time

24 you say load Facebook to the time that all of the parts

25 of Facebook are loaded.   And they make that calculation

 1 by correlating all of the different connections that are

 2 required to load that page, starting with the time of

 3 the first one and ending with the time of the last one.

 4 So if we turn to Page 10 of that document, it describes

 5 how that calculation is made, and it describes using the

 6 URI, which is the destination, how it also uses the HTTP

 7 to refer and some of the other information that I had

 8 just pointed to in the flow-entry to demonstrate that

 9 information in the flow record is sufficient to identify

10 the flow-entry and also to allow it to associate with

11 previously-encountered conversational flows.

12   Q.   And as a result of -- of that event you just

13 walked through, Dr. Almeroth, can you check the box on

14 19(d)?

15   A.   Yes, we can.

16   Q.   Moving to 19(e), which is the limitation that

17 starts by describing a look-up engine, can you describe

18 for the jury what you looked at and the evidence for --

19 that you looked at for infringement for 19(e)?

20   A.   Right. For 19(e), this is a look-up engine.

21 And the function of the look-up engine, as it's

22 described in the words of the claim here, roughly is to

23 look at packets that come in and determine whether

24 they're for an existing flow or whether they're for a

25 new flow. Packets come in, and then you have to see

1 which flow that they're associated with.

2   So the evidence that I looked at for this one,

3 the first one here is PTX-202 on Page 1. This is

4 another one of the source code files, and so it talks

5 about FSPP_G10.c.

6   And it's the platform independent packet

7 processing code for G10.

8   What I particularly want to point out here is

9 on Page 3 of this source code file, there is a function

10 to search the FSB, to search the flow state block, and

11 determine if packets coming in match with an existing

12 flow-entry or not. And so that's part of what's shown

13 in this document.

14   Q.   And as a result, in your opinion, can you

15 check the box on 19(e)?

16   A.   Yes, sir.

17   Q.   Moving to the second to last limitation of

18 this claim with respect to the G10, Claim Element (f) is

19 a flow insertion engine coupled to the flow-entry

20 memory, and then there are, of course, many other words

21 with respect to that one. Can you describe what you did

22 for the jury and the evidence you relied on?

23   A.   Certainly. At a high level, the flow

24 insertion engine, once you looked up the flow, if it

25 finds a flow, it can update that flow-entry with

1 information from the packet that was just observed. If

2 there isn't an existing flow that's found, then it can

3 create a new flow-entry.

4   And imagine having to do this millions of

5 times a second. Every time packets come in, they have

6 to be associated with flows. And all of that

7 information in the flow record is updated.

8   In the source code, this is back to the

9 Exhibit 198, the Fsb -- the flow state block -- dot c.

10 Dot c stands for the c programming language. And in

11 particular, what I can point out here is on Page 39 of

12 that document, there is source code that starts and

13 says: Create and initialize a new flow.

14   This is one part of the claim. Throughout the

15 rest of this source code document, there's other

16 functions I've looked at and analyzed, looking at the

17 whole file, and determined that each of the requirements

18 of Claim 19(f) were present based on this source code.

19 There's another file I want to point to. This is

20 PTX-198, Pages 120 and 121. And this is where you're

21 also looking at updating elements of that flow-entry.

22   One of the other parts I'll talk about is down

23 here. It talks about monitoring and classifying the

24 packet. And so, for example, there's the HTTP protocol

25 in the source code. And so there's examples for

1 different protocols where the processing of that

2 protocol happens.

3   Again, across the source code files that I've

4 looked at, I've ensured that all of the words of the

5 claim are met.

6   There's one -- one more. So this is back to

7 PTX-202, Page 1. I showed this already, so let me just

8 dive in -- into the source code here. If the FSB is not

9 found, create a new flow. So lots of source code files

10 that describe the functionality for all of the words

11 that are in this Limitation (f).

12   Q.   Dr. Almeroth, on the slide that is on the

13 screen right now, there's source code. And then -- and

14 then you just read a sentence. Can you explain to the

15 jury what these, I guess, comments are in the source

16 code?

17   A.   Yes. So in the source code, you can -- you

18 can start to see some of the source code down here.

19 It's -- it's human readable to somebody who knows how to

20 do this kind of programming. You'll see things like if

21 statements, and then it has variable names here and then

22 you're checking for conditions and then you'll execute

23 new things. It makes sense to me when I go through and

24 read it, but sometimes it's difficult for a lot of

25 people to go through and look at it.

```
 1            So the person who programmed it will usually

 2  add comments at the beginning of -- of a section of code

 3  to describe what that functionality is.

 4            So I've looked at the functionality and

 5  confirmed that it's consistent with what those comments

 6  are.  And instead of sort of calling out sort of very

 7  difficult to understand language in the program, I'm

 8  really pointing out the comments as part of what I've

 9  relied on.

10       Q.   And based on the evidence you just walked the

11  jury through, can you check off Element 19(f)?

12       A.   Yes.

13       Q.   The last element of Claim 19 with respect to

14  the G10 is wherein the operation of the parser subsystem

15  depends on one or more of the protocols to which the

16  packet conforms.

17            Can you describe to the jury the evidence and

18  opinion you reached with respect to this last claim

19  element?

20       A.   Yes.  For this last limitation, we're back to

21  PTX-173, which includes this TOPparse functionality.

22  I'm just going to refer back to some of the evidence I

23  pointed to earlier when I showed you some of the details

24  of this file.

25            But what that TOPparse does is it does parsing
```

1 so it's part of the parser subsystem, and then it does

2 that -- it works for one or more protocols. So there

3 are details in this source code file that work for

4 things like HTTP and TCP, and those are the protocols

5 that the claim is talking about as examples.

6   Now -- go ahead. I'm sorry.

7   Q.   Is -- with respect to the -- was there

8 anything other than the TOPparse implementation of

9 Avenger that you've pointed to with respect to the

10 wherein clause?

11   A.   That's primarily the source code that I

12 pointed to that I just talked about, but the opinions in

13 my analysis were to look at all of the documents that

14 were available to confirm that this limitation -- in

15 fact, all of the other limitations were met.

16   Q.   And so can you check off the wherein clause

17 limitation for the G10?

18   A.   Yes.

19   Q.   And summarize -- and so in your opinion, does

20 the G10 meet each element of Claim 19 of the '789

21 patent?

22   A.   It does. So now you see on Demonstrative 79

23 that I've gone through and described my analysis and my

24 methodology for each of the limitations here. And

25 because each of the limitations has a check box by it,

 1 then I can put a check box in this summary slide on --

 2 on Slide 80 that Claim 19 of the '789 patent for the

 3 GeoProbe G10 is infringed.

 4   Q.   Did you also look, Dr. Almeroth, at whether or

 5 not the GeoBlade infringes Claim 19 of the '789 patent?

 6   A.   Yes, I did.

 7   Q.   And can you assure the jury that there is some

 8 kind of way to walk through that that's a little bit

 9 less onerous than the G10?

10   A.   Yes. I wanted to explain my methodology in

11 careful detail for the GeoProbe G10, Claim 19. I did

12 the same kind of analysis for the GeoBlade, but there

13 are parts of the GeoBlade for some of the limitations

14 that are the same source code, for example, as for the

15 G10. So I'm not going to spend the same amount of time

16 going over Claim 19 for the GeoBlade that I just did for

17 the G10.

18   Q.   Let's start with the preamble of Claim 19 and

19 your opinion as to whether the GeoBlade meets the

20 preamble of Claim 19.

21   A.   Okay. I'm not going to reread the

22 limitations. We've seen the preamble for Claim 19. I

23 relied on evidence from Exhibit PTX-168 on Page 1. This

24 description of what the GeoBlade can do is very

25 consistent with that background from the patent that I

```
 1  described.  Network volume -- traffic volumes are

 2  already at an all-time high.  There's more growth on the

 3  horizon.  There are smartphones that are coming, whether

 4  it's from smartphones or computers.  Clearly, there's an

 5  increasing amount of traffic.  And it becomes important

 6  for NetScout and NetScout's customers to be able to

 7  leverage the highly customizable configuration for the

 8  tightest control over how network data is processed by

 9  protocol and the desired granularity.

10          So it's exactly describing a network monitor.

11  It can examine packets that come through a connection

12  point, and meet all of the words in the requirements of

13  the preamble for Claim 19.

14          Sorry.  There's -- there's one other piece of

15  evidence, then.  On the second page of that same

16  document, it talks about the highlights of the platform.

17  It can do layered processing, man -- it manages packets,

18  flows, and sessions based on individual protocol needs.

19  It's monitoring in correlation of user and control

20  planes, the requests and the responses across multiple

21  connections, and also to do it in real-time, which means

22  that even though millions of packets are coming across

23  the network, it can process all of those packets as they

24  come in and create or update flow-entries.

25      Q.   And so as a result of your analysis, Dr.
```

 1 Almeroth, can you check the box on the preamble for the

 2 GeoBlade of Claim 19?

 3   A.   Yes, sir.

 4   Q.   How does the GeoBlade meet Element (a) of

 5 Claim 19?

 6   A.   For Limitation (a), which is the packet --

 7 packet acquisition device, I'm relying on the same page,

 8 PTX-168, Page 2, but a slightly different portion.

 9 And what's described here are the same kinds of Ethernet

10 interfaces that can be used to receive packets from the

11 network.

12   Now we're talking about 10 gig again. Single

13 mode and multimode refer to fiber connections. So those

14 typically support higher speeds and higher quality.

15 So that's the kind of evidence I've relied on for being

16 able to collect packets from the connection point.

17   Q.   And in your opinion, is -- does the GeoBlade

18 contain Element 19 -- or Limitation 19(a) such that you

19 can check the box?

20   A.   Yes. For this evidence and all the evidence

21 that I've relied on and I've seen, we can check the box

22 for 19(a).

23   Q.   How does the GeoBlade meet Limitation (b) of

24 Claim 19?

25   A.   Briefly, I'm going to show this same evidence,

1 so PTX-168, 2. Because we have these network interface

2 cards, network interface cards just like in the G10 when

3 packets are received, and there's a frame memory.

4 Because you have network interface cards on the

5 GeoBlade, they also have buffers to receive packets and

6 to store them while they're being processed.

7   So this limitation is met based on that

8 description, as well.

9   Q.   How does the GeoBlade meet the next element?

10   A.   So for Limitation 19(c), the parser subsystem,

11 here there's a little bit of a difference that I want to

12 describe between the Geo -- the G10 and the GeoBlade.

13   I am going to go back to PTX-279, which is

14 about the EzChip, but what's important here is it talks

15 about porting.

16   So first, it describes the G10 functionality,

17 and then it says: All EzChip functionality must be

18 implemented on the Octeon. So the Octeon is the name

19 for the GeoBlade.

20   And so based on this functionality being

21 implemented, the description of what the functionality

22 is before, that's part of the evidence that I've relied

23 on here.

24   Now, there's deposition testimony, as well,

25 again, from Mr. Curtin, NetScout's corporate designee.

1 And what it says is that there's a pre-Proc. So the

2 pre-Proc is code that exists on the GeoBlade that is

3 responsible for ensuring that the data that reaches the

4 Cavium, which does the flow-entry database, doesn't have

5 to change. So they implemented the functionality of the

6 parser subsystem in something called the pre-Proc.

7   The pre-Proc does the limitation. It's a

8 little bit different than the way that the G10 did it,

9 but it both makes sure that the data that then goes into

10 the Cavium is the same as -- for the G10 as it was for

11 the GeoBlade.

12   Q.   And in your opinion, does the GeoBlade, as a

13 result, meet element -- I'm sorry, Limitation (c) of the

14 '789 patent?

15   A.   It does. And there's one other thing I wanted

16 to go through. It's my fault I didn't get there.

17   This is PTX-203. This is platform independent

18 packet processing code for the G500. That's the

19 GeoBlade. It does the same kind of packet processing

20 that I described earlier. I looked at all of the

21 evidence. I'm citing to this as kind of exemplary. It

22 was part of that analysis that allowed me to confirm

23 that all of the words of Limitation 19(c) were met in my

24 analysis.

25   Q.   How did you know that the Octeon and G500 were

1 other names for the GeoBlade?

2   A.   There are documents that -- that say that.

3 There's deposition testimony and admissions that say

4 that those were the code names for the G10 -- sorry, the

5 GeoBlade.

6   Q.   And so we can check the block -- box for

7 Element (c), in your opinion?

8   A.   Yes.

9   Q.   How does the GeoBlade meet Limitation (d) in

10 Claim 19?

11   A.   Okay. This was the -- the longer limitation

12 that I spent time on before. I started with the flow

13 state block and then talked about the flow records. And

14 then talked about how there were examples that could use

15 that information. It demonstrated that what was in the

16 flow records was -- was sufficient to meet the words of

17 the claim for flow-entries for previously encountered

18 conversational flows.

19   What I'm going to point to here is the

20 documentation and evidence that shows that the way that

21 the GeoBlade works is similar to the G10. This is

22 PTX-267 on Page 16. I talked about this portion

23 already, that within the G10, there is this flow state

24 block.

25   And what this document shows is that there's a

1 flow state block in the G10, and there's a flow state

2 block that's in the GeoBlade, as well.

3   That figure was confirmed through deposition

4 testimony from Mr. Curtin. I haven't been reading the

5 dates. I should have been doing that.

6   So this is from his deposition on 5/10/2017,

7 on Page 117, Line 25, through 118, Line 8. And what

8 this describes is it's referring to questions about the

9 document that I just showed. It represents a

10 generalization showing how the functions of the G10 map

11 to the GeoBlade. And then he's talking about how those

12 functions are kind of the routines and ultimately the

13 source code.

14   There's additional testimony, then, from that

15 same deposition, Volume 2, Page 119, Lines 15 through

16 20. I showed this before for the idea of the parser

17 subsystem, but the part I want to point out to now is

18 that the Cavium code didn't -- did not have to change.

19 So all of the evidence that I pointed to earlier about

20 the Fsb.c source code file, the flow header document,

21 all of that is exactly the same evidence that I've

22 relied on for the rest of this limitation.

23   Q.   And as a result, Dr. Almeroth, in your

24 opinion, can you check the box for 19(d) with respect to

25 the GeoBlade?

```
 1        A.    Yes.

 2        Q.    How does the GeoBlade meet Limitation (e) of

 3  Claim 19?

 4        A.    So for (e) and the look-up engine, I can point

 5  to PTX-203.  Remember, this is the limitation where

 6  you're trying to see if packets that are coming in are

 7  part of an existing flow or not.  In the source code

 8  file, PTX-203 at Page 36, it describes that

 9  functionality and in the source code in the rest of that

10  file.

11        Q.    And can you check the box for Limitation 19(e)

12  as a result?

13        A.    Yes, sir.

14        Q.    How does the GeoBlade meet Limitation 19(e)?

15        A.    For 19(e) -- or, sorry, 19(f)?

16        Q.    19(f), my apologies.

17        A.    Okay.  For 19(f), this is also PTX-203 on Page

18  36, we can point to that same source code where

19  you're -- once you've looked up the packet descriptor,

20  you can also then add to an existing flow-entry or

21  create a -- a new flow-entry.

22        Q.    And as a result, in your opinion, does the

23  Geo -- the GeoBlade meet Limitation (f)?

24        A.    Yes, it does.

25        Q.    How about the last element of Claim 19 with
```

1 respect to the GeoBlade?

2   A.   For the last limitation, it's the wherein and

3 the protocols again. We can go back and look at the

4 TOPparse source code file, PTX-173. And that was the

5 file that talked about TCP and IP and HTTP headers. So

6 based on that source code file and the other evidence

7 I've seen, I believe this limitation is met, as well.

8   Q.   And you can check the box and summarize where

9 we are?

10   A.   Yes. So now you see on Demonstrative 101 that

11 I've presented some of the evidence in my methodology

12 for how I've ensured that each of the limitations of

13 Claim 19 of the '789 patent are met by the GeoBlade.

14 And based on that, I can put a check box in the summary

15 on Slide 102 that my opinion is the GeoBlade infringes

16 Claim 19 of the '789 patent.

17   Q.   Now, I believe for -- there's one more claim

18 of the '789 patent called a dependent claim. And did

19 you analyze infringement of that claim? Did you look at

20 the GeoProbe G10 and the GeoBlade together?

21   A.   I did.

22   Q.   And after -- what is your -- describe for the

23 jury your opinion with respect to infringement about

24 Claim 20 for the G10 and GeoBlade.

25   A.   Sure. So I prepared a demonstrative that

1 shows Claim 20. And Claim 20 is a dependent claim.

2 That means in order to infringe Claim 20, it has to meet

3 all of the limitations of Claim 19.

4   Now, luckily, we don't have to go through

5 Claim 19 again. I've shown my reasoning for why all of

6 the limitations of Claim 19 are met for both the G10 and

7 the GeoBlade.

8   Claim 20 adds an additional limitation. It

9 makes it narrower. And in this case, what it's saying

10 is that -- that the packets that are received by the

11 connection point are examined in real-time.

12   And so I have Demonstrative DX-650 on Page 4.

13 It's a document that describes deep packet

14 classification and is describing the functionality as it

15 relates to both the G10 and the GeoBlade. And you can

16 see very clearly that NetScout is saying that they

17 support real-time packet classification.

18   Q.   And in your opinion, Dr. Almeroth, do the G10

19 and the GeoBlade each infringe Claim 20?

20   A.   Yes. We can put a check box there.

21   And then back to the summary page, we can put

22 check boxes for both the G10 and the GeoBlade for the

23 additional limitation of Claim 20 and the fact that it

24 meets all of the limitations of Claim 19 already based

25 on the analysis I had gone through previously.

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 1                    THE COURT:   Now, before we go into the

 2   '751 patent, we're going to take a short recess, ladies

 3   and gentlemen.

 4                    If you'll just leave your notebooks

 5   closed and in your chairs, use this opportunity to

 6   stretch your legs and get a drink of water, and we'll be

 7   back in here shortly to continue.  The jury's excused

 8   for recess.

 9                    (Jury out.)

10                    THE COURT:   Again, Counsel, we'll keep

11   this short.  The Court stands in recess.

12                    COURT SECURITY OFFICER:  All rise.

13                    (Recess.)

14                    (Jury out.)

15                    COURT SECURITY OFFICER:  All rise.

16                    THE COURT:  Be seated, please.

17                    All right.  Mr. Skiermont, are you

18   prepared to continue with your direct examination?

19                    MR. SKIERMONT:  Yes, Your Honor.

20                    THE COURT:  Let's bring in the jury,

21   Mr. Elliott.

22                    (Jury in.)

23                    THE COURT:  Welcome back, ladies and

24   gentlemen.  Please be seated.

25                    We'll continue with the direct
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 1  examination of the witness by the Plaintiff.

 2              Counsel, you may proceed.

 3              MR. SKIERMONT:  Thank you, Your Honor.

 4      Q.   (By Mr. Skiermont)  Welcome back, Dr.

 5  Almeroth.

 6          At the beginning of your testimony today, you

 7  mentioned that you were asked about an opinion as to

 8  whether the G10 and GeoBlade infringed PI's '751 patent.

 9          Do you recall that?

10      A.   I do.

11              THE COURT:  Mr. Skiermont, pull the

12  microphone a little closer to you, please.

13              MR. SKIERMONT:  Thank you, Your Honor.

14      Q.   (By Mr. Skiermont)  How did you analyze

15  NetScout's infringement with respect to the '751 patent?

16      A.   I used a similar methodology that I used for

17  the '789 patent.

18      Q.   And can you explain what that methodology was?

19      A.   Sure.  I looked at the evidence.  Again, I

20  compared the claims against the infringing products on a

21  limitation-by-limitation basis.  I used the evidence

22  that was available to me.  And based on that evidence, I

23  reached a conclusion about whether or not each of the

24  limitations was met.  And then ultimately with respect

25  to infringement.
```

1   Now, for the -- the claims of the '751 patent,

2   there's one difference between the claims of the '789

3   patent.

4   Q.   And so can you explain the difference of how

5   you approached the '751 analysis compared to the '789?

6   A.   So I had the demonstrative up on this.

7   The '751 patent claims are what are called

8   method claims, and the claims of the '789 patent were

9   apparatus claims. And so the difference is that I've

10   relied on an additional piece of information from what's

11   called an RFA, a request for admission. And what the

12   request for admission says is admit that you have used

13   the accused instrumentality in the United States.

14   And NetScout had some language about objecting

15   to what the accused instrumentality was. But

16   ultimately, they said admitted with respect to the

17   GeoProbe G10 and the G -- GeoBlade only, which are the

18   two products that I'm offering opinions about here

19   today.

20   So that means that part of my opinions for any

21   of the method claims are that NetScout directly

22   infringes those claims based on their admitted use in

23   the United States. And it's my understanding that that

24   includes both testing, as well as instances where they

25   use those probes out in the field.

```
 1        Q.    And, Dr. Almeroth, was there anything else you

 2  did differently with respect to the '75 -- your analysis

 3  of infringement of the '751 compared to the '789?

 4        A.    That was the -- the principal difference.   I'm

 5  still relying on the same evidence about what the

 6  devices do.

 7        Q.    Was there anything that you could borrow

 8  from -- from your '789 infringement analysis and use it

 9  for the '751?

10        A.    Yes, sir.   I've prepared a demonstrative on

11  this.   What I'm trying to do is look at Claim 19, which

12  I've already analyzed for both infringing products, and

13  compare that to some of the language with respect to

14  Claim 1 of the '751 patent, which is the first claim

15  that I analyzed.

16              And what I observed were -- was that there

17  were similarities between language in the two claims.

18              So, for example, the preamble of Claim 1 of

19  the '751 patent, it's a method claim, it's analyzing a

20  flow of packets passing through a connection point on a

21  computer network, and that's very similar language to

22  what was included in Claim Limitation 19(a) and 19(b).

23  It's not identical.   But the evidence that I relied on

24  for whether or not the -- the preamble of Claim 1 of the

25  '751 patent was met was the same evidence I relied on
```

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 1  from 19(a) and (b).

 2            And then the same thing for Limitation 1(a),

 3  receiving a packet from a packet acquisition device

 4  coupled to the connection point.  That's very similar

 5  language to, again, those same limitations of 19(a) and

 6  19(b).

 7            I used the same evidence, and through my

 8  analysis, I concluded that because I had checked off

 9  19(a) and (b), that that same evidence allowed me to

10  check off Claim 1 preamble and Claim 1(a).

11            There's another instance, as well.  This is

12  for Claim 1, Limitation (b) of the '751 patent, that the

13  language and evidence is similar to what I relied on

14  from Claim 19(d) of the '789 patent.  And so the

15  evidence that I relied on previously that I had

16  previously described is equally applicable to Claim

17  1(b).

18            Now, I haven't highlighted all of Limitation

19  1(b).  There's some additional language, a

20  conversational flow further having a set of one or more

21  states, including an additional state.

22            I didn't talk about that in the context of

23  Claim 19 of the '789 patent, so I will be prepared to

24  offer opinions on that portion of the limitation that I

25  think require some additional analysis.
```

1   The final part is for, let's see, the wherein

2 clause of Claim 1 of the '751 patent, including all the

3 way through to the end of the claim, that that is met

4 based on the same evidence that I identified and relied

5 on from Claim 19, the preamble Limitation (a),

6 Limitation (b), and Limitation (d).

7   Q.   And so as I understand it, Dr. Almeroth, we

8 come to Claim 1 of the '751 patent where you have

9 checked off four of the limitations of Claim 1 based on

10 the analysis you've already done and evidence you've

11 already walked through with respect to the '789 patent,

12 correct?

13   A.   Yes, sir.

14   Q.   All right. Well, let's finish up or let's go

15 through the claim elements of Claim 1 of '751 that have

16 not yet been checked.

17   Starting with the sub-element of Limitation

18 (b) which is conversational flow further having a set of

19 one or more states, including an additional state?

20   A.   Sure. So for this limitation, I'll -- I'll

21 show a couple of different source code examples. The

22 first is from PTX-198. The first is the Page 1. This

23 is the Fsb.c.

24   And one of the things that I wanted to do is

25 up here in my binder, I have the full exhibit, and what

```
 1  I wanted to do was -- was to get out Exhibit 198.  And

 2  this is the -- the source code for Fsb.c.  It's

 3  double-sided, and so some of the call-outs that you've

 4  seen as part of my testimony are all found in -- in this

 5  document.  It's -- it's quite lengthy.  There's a lot of

 6  source code and a lot of instructions, but that's where

 7  I'm -- I'm finding some of these limitations.

 8             Of particular here is from Page 6.  I have a

 9  call-out.  And what I'm particularly interested in here

10  is it's mentioning the HTTP protocol, and so that is

11  some of the source code that I've relied on, including

12  how that code is called.

13             There's some additional evidence also from

14  PX- -- from PTX-198, but later in the document, this is

15  on Pages 59 and 60, and so you see here more HTTP

16  processing where you're also setting the session

17  initialization inside the Fsb, and so this is some of

18  the code that I've relied on that demonstrates that the

19  conversational flows, which include the flow-entries and

20  HTTP as examples, have one or more states, including an

21  initial state.

22      Q.   And based on that code in PTX-198, in your

23  opinion, is that element that was not in common with

24  '789 of Claim 1, Element (b), is it met by the G10?

25      A.   Yes, it is.
```

 1   Q.   And what about with respect -- with respect to

 2 Claim 1, element -- or Limitation (c) of the '751

 3 patent, how does the G10 meet that claim limitation?

 4   A.   Okay. For this limitation, it has some

 5 similarity to what I've discussed previously. The

 6 limitation is if the packet is of an existing flow

 7 identity -- so matching the existing flow, but now

 8 there's some additional information. Identifying the

 9 last encountered state of the flow, performing any state

10 operations specific to the state of the flow, and

11 updating the flow-entry of the existing flow, including

12 storing one or more statistical measures kept in the

13 flow-entry.

14   So I've talked a little bit about how the

15 existing flows are identified and updated. And I have

16 some source code here that goes into detail.

17   So PTX-198, Page 86, the comment says: To

18 update the flow record with the information from the

19 incoming packet, there's source code that implements

20 that functionality as it's described in the comment and

21 that I've confirmed.

22   There's also PTX-198, that same exhibit, on

23 Page 91. Here it's talking about the TCP protocol and

24 some of the events around establishing a connection and

25 also determining whether the connection is closing.

 1 Those are all different states as they relate to TCP

 2 connections. TCP connections are also stored as part of

 3 the flow-entry.

 4   More source code, Page 74, the same exhibit,

 5 198. Here you can update the protocol and direction

 6 information. So part of what has to happen in the flow

 7 state block is determining whether or not packets are

 8 coming from the server to the client or whether or not

 9 they're going from the client to the server.

10   In some cases, that's upstream, and then the

11 data flows downstream. So this is one portion of source

12 code that describes that.

13   Here's another from Page 54. This is kind of

14 a lengthy comment that I think does a good job of

15 describing what happens in the flow state block, how

16 it's updating the packet count, which was part of the

17 statistical measures.

18   It also has flow state information. It says

19 right there it has state machine processing, and so

20 there's state and then state operations. The state

21 machine is -- is really the state of the connection.

22 And so I've looked through these comments and then the

23 source code that comes after to confirm that each part

24 of the limitation here is met by the source code.

25   Q.   And with respect to Element (d) of Claim 1,

 1 how does the G10 -- how does the G10 meet Element (d)?

 2   A.   I'm sorry, I had -- I think I had one more

 3 thing I wanted to describe for Limitation (c) before we

 4 checked it off.

 5   This was the initialize the TCP state machine,

 6 PTX -- Page 46. And so, again, this state machine for

 7 TCP is part of the state that's required in that

 8 limitation.

 9   Okay. So based on all that evidence, then we

10 can check off 1(c).

11   Q.   And how does G -- the G10 meet Element (d)?

12   A.   Okay. For (d), it says: If the packet is for

13 a new flow, performing any state operations required for

14 the initial state of the new flow and storing a new

15 flow-entry. Again, I can rely on this PTX-198 at Page

16 46 for the state machine initialization that happens

17 here, init, and then initialize TCP state machine.

18 That's some of the evidence and some of the functions in

19 the source code that I've relied on.

20   There's also then for -- this also includes

21 statistical measures, and so there's evidence of the

22 statistical measures in PTX-223. This is the flow

23 records format, and I showed this slide earlier in the

24 context of describing in a document the entries that

25 were stored in the flow state block for flow-entries.

```
 1  And I mentioned some of these examples previously and

 2  the variable length, the extension data, and then the

 3  HTTP refer.

 4          The one additional thing that I want to point

 5  out here is that as part of PTX-223 on Page 5, it

 6  includes RX which is received bytes, TX for transmit

 7  bytes, it counts packets and effective bytes, ones that

 8  weren't in error, and those are examples of statistical

 9  measures throughout the flow record format that

10  demonstrate that there are statistical measures that are

11  kept.

12      Q.   And so in your opinion, the G10 can -- the G10

13  meets Element (d) of Claim 1 of the '751 patent?

14      A.   Yes, it does.

15      Q.   And so have you concluded then in your

16  opinion, Dr. Almeroth, that the G10 infringes Claim 1 of

17  the '751 patent?

18      A.   Yes, because all of the limitations I've

19  analyzed and determined that they were present in the

20  G10 for Claim 1, and then based on the request for

21  admissions that NetScout is practicing this claim or

22  practicing and using the G10 in the United States, that

23  I can check off this limitation -- this claim as being

24  infringed by the G10.

25      Q.   Now, did you also analyze, Dr. Almeroth,
```

1 whether the GeoBlade infringes Claim 1 of the '751

2 patent?

3   A.   Yes, I did.

4   Q.   And what is your opinion?

5   A.   Well, my opinion is based on, for example,

6 PTX-267, Page 16, I described this earlier, that it

7 shows the functionality in the G10 probe and in the

8 GeoBlade and where the similarities exist.

9   Now, all of the limitations for Claim 1 of the

10 '751 patent are all in functionality that's common

11 between the two. So there's no additional analysis that

12 I have to do with respect to the GeoBlade that I haven't

13 already covered for the G10. That for the receiving a

14 packet, that was a portion that I -- I had already

15 gotten from the '789 patent, Claim 1.

16   So by the time you get to the additional

17 limitations where I had to do additional analysis, that

18 is the same -- exactly the same in the G10 and the

19 GeoBlade. So all of the limitations are present for all

20 of Claim 1 of the '751 patent for the GeoBlade.

21   Q.   And did you also analyze whether the G10 and

22 GeoBlade infringe Claim -- Dependent Claim 5 of the '751

23 patent?

24   A.   Yes, I did.

25   Q.   And what is your opinion?

 1   A.   So based on the evidence I've seen, which, for

 2   example, is PTX-223 at Page 5, I showed this

 3   previously -- let me back up.

 4   Claim 5, it's a method according to Claim 1.

 5   So first, all of the limitations of Claim 1 have to be

 6   present. I've done that analysis, did the check boxes

 7   for the G10 and the GeoBlade.

 8   So the additional limitation here is further

 9   including reporting one or more metrics related to the

10   flow of a flow-entry from one or more of the statistical

11   measures in the flow-entry. And so the example that I'm

12   showing from PTX-223 is on Page 5 where I'm identifying

13   received and transmitted bytes, packets, and effective

14   bytes. So that's an example that meets Claim 5 for both

15   the G10 and the GeoBlade.

16   Q.   And so in your opinion, based on the evidence

17   you just summarized and your analysis of the two

18   products, does the G10 and GeoBlade both infringe Claim

19   5 of the '751?

20   A.   Yes.

21   Q.   All right. Now, we've come to the third and

22   final patent in the case, which is Packet Intelligence's

23   '725 patent. And you mentioned at the beginning of your

24   testimony that you were asked to offer an opinion as to

25   whether the G10 and GeoBlade infringe Claims 10 and 17

 1 of the '725 patent. Do you recall that?

 2   A.   I do.

 3   Q.   And how did you analyze NetScout's

 4 infringement with respect to the '725 patent?

 5   A.   Using the same methodology that I described

 6 earlier, both generally and then also with respect to

 7 the way that I've analyzed the method claims in the '725

 8 patent.

 9   Q.   Does the G10 -- I'm sorry, does the -- does

10 '789, Claim 19 is the apparatus, and '725 is a method

11 claim like the '751 that we looked at a moment ago?

12   A.   There are some similarities, so I can do the

13 same kind of similarity matching.

14   If I start off here on my next demonstrative,

15 133, you see the first claim from the '725 patent, Claim

16 10. If you line that up side-by-side with Claim 19 of

17 the '789 patent, Claim 10, Limitation (a) is receiving

18 the packet.

19   There's also identifying the packet as

20 belonging to a conversational flow. Obviously, I've

21 talked about that a fair amount this afternoon. I'm

22 relying on the same evidence from the preamble of Claim

23 19, Limitation (a), and also Limitation (d) of Claim 19

24 from the '789 patent.

25   Based on -- on having already looked at that

 1 evidence, I can check off 10(a) and the last portion of

 2 the wherein clause of Claim 10 of the '725 patent.

 3   Q.   And were there any other limitations in Claim

 4 10 of the '725 patent that -- that related to any of

 5 your previous analysis?

 6   A.   They do relate in part, but I want to treat

 7 them separately because the words are different, and

 8 they include some additional requirements. Much of the

 9 evidence will be the same, but I'll -- I'll very quickly

10 step through the limitations of Claim 10.

11   Q.   With respect to -- well, actually, before we

12 get into that, you mentioned that Claim 10 -- or we've

13 seen Claim 10 of the '725 patent includes limitations

14 regarding protocol specific operations, correct?

15   A.   Yes.

16   Q.   And can you tell the jury a little bit about

17 what that means?

18   A.   So protocol specific operations are, for

19 example, when packets are received and they're parsed

20 and the state is updated with respect to that protocol.

21 One of the details I didn't get into earlier in my

22 tutorial, I'll peel the onion a little bit deeper, is

23 when a probe sees a packet, and it might be for a

24 connection setup or a connection teardown or updating a

25 sequence number, those are the kind of protocol

1 operations that would be performed and would change the

2 state associated with that particular protocol.

3   And so there are state operations that the

4 accused products perform -- the infringing products

5 perform and that are described in the claims and

6 required for infringement.

7   So I had to look not only at the protocols and

8 what they were, but some claims require looking at what

9 the protocol state operations are and then how they're

10 defined. And so that's in some of these later claims.

11   Q.   Did you analyze the infringement of the '725

12 patent's asserted claims, did you analyze G10 and

13 GeoBlade together?

14   A.   Yes, I did.

15   Q.   How does the G10 and GeoBlade meet Limitation

16 (b) and (b)(i) of '725, Claim 10?

17   A.   Sure. I'm going to take these two limitations

18 together. We've already checked off 10(a) because of

19 its similarity. Oh, and -- and for the preamble,

20 I'll -- I'll come back and discuss that towards the end.

21 But for 10(b) and sub-bullet (i), it talks about a set

22 of protocol descriptions for a plurality of protocols

23 that confirm to the layered model. So I talked about

24 how the protocols conformed to the layered model

25 earlier.

1   And then this -- there's three sub-bullets

2 that are required of the set of protocol descriptors.

3 And I'm going to talk about the first one here.

4 And what that says is that it's interested in the

5 particular information that -- for any particular child

6 protocol, the particular protocol at the particular

7 layer level information. So the Limitation (i), in

8 short, is asking about what the information is in the --

9 in the protocol.

10   There's some other words here about child

11 protocols. There's a relationship when you stack them

12 and encapsulate them. HTTP is in the inside. It's a

13 child of TCP. TCP is a child of IP. It's a way of

14 representing the order in which the protocol headers are

15 added and processed. That child protocol is also a

16 claim term that the Court provided a construction on,

17 and it's essentially what I just described.

18   So I needed to find a protocol description

19 that for a child protocol, somewhere in the

20 relationship, it had to be able to identify the

21 information associated with that protocol.

22   In both G10 and GeoBlade, the infringing

23 products, there is what are called P list files. And P

24 list stands for protocol list. And there's a number of

25 these different files. They're in a format called XML,

1   so it's another kind of computer language. This is an

2   example of the HTTP.plist, Page 1 of that file, and it

3   describes sort the of transaction state and information

4   about the HTTP protocol that's used as part of

5   processing when HTTP packets come in.

6   There are these descriptions for each of the

7   different protocols, and so they are protocol

8   descriptions. HTTP is a child of TCP is one example.

9   So the -- the child/parent relationship required here is

10 met. And then it also identifies information about the

11 protocol.

12   Those are the highlights. When I did my

13 analysis, I looked through each of the words in the --

14 in the claim limitation and ensured that they were

15 present in the evidence that I was looking at.

16   Now, these P list files on the next

17 demonstrative for; 137 comes from PTX-200. And what

18 both the G10 and the GeoBlade do is they're able to read

19 in these P list files and then use them as part of their

20 analysis when packets come in and they're matching those

21 against protocols.

22   So for all of -- let's see, there's one more.

23 And this also talks about as another example the

24 IP/port-range classification that happens, and that's

25 also based on -- on P list files, as well.

```
 1              So for all of those reasons, I concluded
 2  that -- that these two limitations were met.
 3       Q.    And so you can check the box in your opinion
 4  for Element (b) and (b)(i)?
 5       A.    Yes.
 6       Q.    How does the G10 and GeoBlade meet Element --
 7  or Limitation (b)(ii) of the '725 --
 8       A.    Okay.
 9       Q.    -- claim 10?
10       A.    For (b)(ii), let me back up a little bit.
11  (b)(ii) is where the information is stored inside of the
12  child protocol.  Limitation (i) is what is the
13  information, what is the information, the particular
14  information.  And Limitation (iii) what are the protocol
15  specific operations associated with that protocol.
16  And all three of these have to be present in the P list
17  files.  So the second one is where that information is
18  located.
19              So in PTX-210 on Page 12, it's talking about
20  the IPv4 header format.  That includes -- there's a
21  protocol field.  That protocol field in IP says what
22  protocol is next in line.  Usually it's something like
23  TCP or UDP.
24              So the fact that in this structure, there is
25  an indicator of where the protocol field is demonstrates
```

1 the location for IP where the header information is,

2 okay.

3   Next then in the evidence is looking at the

4 TCP packet. It has a header information, and it

5 identifies a source port and a destination port. That

6 came up in earlier testimony. There was the 0 to 1,024

7 ports for well-known applications. Port 80 is for HTTP

8 traffic. So based on the port number for the range that

9 are well-known ports, you then have what the associated

10 application is, and it tells you where the location of

11 that information is contained.

12   And so for that reason, that's some of the

13 evidence I considered in determining that this

14 limitation was met.

15   Q.   And so then can we move -- we have two left

16 with respect to Claim 10, and that is (b)(iii), which I

17 think you characterized as the protocol specific

18 operations to be performed for the particular protocol

19 at the particular layer level. And can you describe how

20 in your opinion the -- both accused products meet that

21 limitation?

22   A.   Certainly. So within the protocol

23 descriptions, they include descriptions of HTTP. And

24 then when the source code is analyzing HTTP packets it's

25 performing, for example, protocol specific operations

1 with respect to HTTP. It's reading the HTTP packets,

2 it's analyzing them and putting them into the

3 corresponding flow-entries inside of that flow state

4 block. And it's doing that for all the different

5 protocols. I'm using the HTTP as an example here.

6   Q.   And based on that evidence and your analysis,

7 can you check the box for that limitation?

8   A.   Yes.

9   Q.   The final limitation in Claim 10 is Element

10 10(c) for the '725 patent, performing protocol specific

11 operations on the packet specified by the set of

12 protocol descriptions based on other protocols.

13   Does the G10 and GeoBlade meet this

14 limitation?

15   A.   It does. I can rely on the same evidence, so

16 PTX-198 at 120 and 121. This is where it's actually

17 performing the operations. So (c) is pretty

18 straightforward to check off. And the reason I'm able

19 to do that is it's performing the operations that are

20 described and associated with HTTP as part of the

21 protocol descriptions and then the three requirements

22 there.

23   So the source code here shows for HTTP, as an

24 example, that it's performing protocol specific

25 operations.

```
 1        Q.    And we -- we still have part of the last
 2  wherein clause of Claim 10 of the '725 patent.
 3             How do the G10 and GeoBlade meet that lim --
 4  the remainder of the wherein limitation?
 5        A.    So for the remainder of the wherein
 6  limitation, you'll see that it says:  Parsing and
 7  extracting operations on a packet to extract selected
 8  portions of the packet.  So for that portion, it's the
 9  same kind of evidence that I had pointed to earlier,
10  that the parsing subsystem does.  You're parsing and
11  you're extracting information, and you're doing it based
12  on -- on the packets.
13             So it's the -- the same kind of evidence that
14  I'm relying on from earlier in the context of the '789
15  patent, Claim 1.
16        Q.    So now that you've gone through the
17  Limitations (a) through (c) and the wherein clause, can
18  you go back up to the preamble and explain your
19  analysis?
20        A.    Yes.  For my analysis here, the -- so I
21  checked off down here.  And so now that we have all of
22  these limitations, I can go back and look at the
23  preamble.  It talked about performing specific protocol
24  operations on a packet passing through a connection
25  point.  I didn't want to handle that separately because
```

 1 I -- I largely addressed it here, performing the

 2 protocol specific operations. It's the same language.

 3 And then the rest of the parts of the preamble are met

 4 because all of the other limitations are met.

 5   Q.   And so in your opinion, Dr. Almeroth, is it

 6 accurate that both the G10 and GeoBlade infringe Claim

 7 10 of the '725 patent?

 8   A.   Yes. All the limitations are present. And I

 9 can add check boxes to the summary slide on 148 for both

10 G10 and the G -- GeoBlade for Claim 10.

11   Q.   For the last asserted claim, did you analyze

12 whether the G10 and GeoBlade infringe Claim -- Dependent

13 Claim -- no, I'm sorry, Independent Claim 17 of the '725

14 patent?

15   A.   Yes, I did.

16   Q.   And what is your opinion?

17   A.   That all of the limitations are present. What

18 I've done here is Claim 10 of the '725 patent is

19 compared against Claim 17 of the '725 patent. I just

20 finished Claim 10. Limitations 10, Preamble (a), (b),

21 (i), (ii), and (iii), and (c) are identical to Claim 17

22 Preamble (a), (b), (i), (ii), and (iii) and (c). It's a

23 little big bigger because of the different font size,

24 but the language is identical.

25   So for both the G10 and the GeoBlade, the

 1 language is the same, so I would rely on the same

 2 analysis.

 3   Q.   And so if I understand you correctly, the

 4 words between what is highlighted on the -- on the

 5 screen between the two claims are exactly the same,

 6 word-for-word?

 7   A.   Yes, sir.

 8   Q.   And so what you need to analyze for

 9 infringement of Claim 17 of the '725 patent is the last

10 wherein clause of Claim 17?

11   A.   Yes.

12   Q.   And have you done that?

13   A.   I have. Now, there's -- there's one

14 additional similarity, which covers the rest of Claim

15 17. This was a matching between Claim 10 of the '725

16 and Claim 17 of the '725, so Claim 10 and 17.

17   Now what I can show is if we go back to Claim

18 1 of the '751 patent, which was the third claim I

19 analyzed, that based on the wherein clause here and

20 limitation 1(c), that the same evidence and methodology

21 that I followed to check those boxes can be applied to

22 this one remaining piece of Claim 17 of the '725 patent.

23   Q.   And so based on your analysis, have you -- in

24 your opinion, do both the G10 and GeoBlade infringe

25 independent Claim 17 of the '725 patent?

1   A.   Yes.   So based on everything I've said up

2 until that point, I can go through for both the G10 and

3 the GeoBlade Claim 17 of the '725, check all the boxes,

4 all the limitations are present, and then ultimately

5 finish off and now show that for the six asserted

6 claims, both the GeoProbe G10 and the GeoBlade infringe

7 all of those.

8   Q.   Dr. Almeroth, were you asked to consider

9 anything else or offer any other opinions in connection

10 with your engagement on this matter?

11   A.   Yes, I was.

12   Q.   And what was that?

13   A.   There was a question of whether or not there

14 are any what are called commercially acceptable

15 non-infringing alternatives, and I was asked to offer an

16 opinion about whether there existed a way of

17 accomplishing the same functionality, achieving the same

18 benefit, the same commercial value, but not infringing

19 the claims.

20   Q.   And did you form an opinion, Dr. Almeroth, on

21 whether there was any evidence of the existence of any

22 available, acceptable, non-infringing alternatives to

23 the infringing NetScout products?

24   A.   Yes, I did.

25   Q.   And what did you conclude?

 1   A.   Based on the evidence of record in this

 2   proceeding, I see no evidence that there are any

 3   available, acceptable, non-infringing alternatives to

 4   the infringing NetScout products.

 5   Q.   And what is your opinion based on?

 6   A.   It's based on reviewing the evidence that is

 7   part of the case and determining that there are other

 8   ways of implementing the same functionality, the same

 9   kinds of inspection that NetScout touts but doing so in

10   a way that does not infringe the claims at issue here.

11   Q.   Thank you, Dr. Almeroth.

12   MR. SKIERMONT: I pass the witness.

13   THE COURT: Cross-examination by the

14   Defendant.

15   CROSS-EXAMINATION

16   BY MR. LYONS:

17   Q.   Good afternoon.

18   A.   Good afternoon.

19   Q.   Dr. Almeroth, I believe you testified you were

20   compensated on an hourly basis?

21   A.   Yes, sir.

22   Q.   And what -- at what rate?

23   A.   It's at $600 an hour.

24   Q.   And how much have you been compensated in this

25   matter to this point?

1   A.   I would guess maybe about 150,000.

2   Q.   And you've worked over 300 hours on this case?

3   A.   Not on this case.

4   Q.   Well, you've -- you have a relationship with

5   Packet Intelligence that goes beyond just this case; is

6   that right?

7   A.   Yes, sir.

8   Q.   And so you'll be continuing to work with them

9   on another matter after this one concludes?

10   A.   Quite possibly, yes.

11   Q.   Now, you testified at some length about your

12 -- your background and -- and various organizations

13 you're part of. Did you mention that you were a member

14 of the RMON Working Group?

15   A.   I did not.

16   Q.   Do you -- so is it true that you're not a

17 member of that group?

18   A.   That's correct. I'm not a member of the RMON

19 Working Group.

20   Q.   You're not a member now, and -- and you

21 weren't in the past; is that right?

22   A.   That's correct.

23   MR. LYONS: Why don't we take a look at

24 the '789 patent, DX-475, and if we can look at Column 2,

25 Lines 42.

```
 1        Q.    (By Mr. Lyons)   In your testimony earlier, you
 2   -- there was a lot of discussion --
 3              MR. LYONS:   You can do the top half of
 4   that paragraph, please.   Thank you.
 5        Q.    (By Mr. Lyons)   You testified at some length
 6   about flows.   I wanted to make sure -- I wanted to ask
 7   you a question about what exactly a connection flow is?
 8        A.    A connection flow, as it describes here, is
 9   used to describe all the packets involved within a
10   single connection.
11        Q.    And a single connection is usually defined
12   based on something called a 5-Tuple?
13        A.    Yes.
14        Q.    And can you explain to the jury what a 5-Tuple
15   is?
16        A.    Sure.   So for a basic 5-Tuple for a connection
17   flow, that's usually the source and destination IP
18   address, like the address, the source and destination
19   port number, some additional information, and then also
20   the protocol field.   So it says what kind of protocol is
21   encapsulated.
22        Q.    Now, if you refer to the patent and the
23   particular call-out on the screen, there's a reference
24   to some prior art packet monitors classified packets
25   into connection flows.   Do you see that?
```

1   A.   I do see that.

2   Q.   And do you agree with the patent that there

3 were, indeed, prior art packet monitors capable of

4 classifying packets into connection flows?

5   A.   I do.

6   Q.   And that wasn't the invention in this patent,

7 right?

8   A.   That was not.

9   Q.   So if a packet monitoring system only

10 classifies connection flows and it doesn't do anymore,

11 that's not going to infringe this patent, right?

12   A.   It likely would not. It would really depend

13 on what you mean by not doing much more. I mean, I

14 would -- you have to analyze the system at the same

15 level of detail that I've done for infringement.

16   Q.   Well, if it doesn't identify and classify

17 conversational flows, rather it just stores and

18 classifies connection flows, we can agree that that --

19 that would not infringe, right?

20   A.   Yeah, I think that's right. It sounds like

21 what you're saying is that there's a limitation that

22 would be missing around conversational flows. And if

23 there's a limitation missing then there is no

24 infringement.

25   Q.   Yeah, if it only stores connection flows and

 1 it's not classifying conversational flows, then the jury

 2 can conclude there's no infringement, right?

 3   A.   Not quite.

 4   Q.   Why not?

 5   A.   Well, you -- you have to look at the specific

 6 claim language in what's required. The words of the

 7 claim matter, and you have to do an analysis of that

 8 claim language compared to the accused system. So it's

 9 hard to say based on your description if there's some

10 language that's not there versus some that is.

11   Q.   So you've studied these claims pretty closely,

12 I take it?

13   A.   I'd -- I'd like to think so, yes.

14   Q.   So they all require identification of

15 conversational flows, right?

16   A.   No, not quite. There's conversational flow

17 language and requirements around conversional flows in

18 the different claims, but it's expressed in slightly

19 different ways.

20   So, for example, if you look at Claim 19 of

21 the '789 patent, the first one that we looked at, what's

22 required is memory for storing a flow-entry -- for

23 flow-entries associated with previously encountered

24 conversational flows. I don't remember exactly what the

25 word is, but the -- the database is for flow-entries.

1 The use of information there to associate the entries as

2 conversational flows can be outside of what the claim

3 actually requires --

4   Q.   Let's -- let's go to Claim 19 now and take a

5 look at the specific limitation that you're testifying

6 about.

7   MR. LYONS: Column 36, Element (d).

8   Q.   (By Mr. Lyons) And it says: A memory for

9 storing a database comprising none or more flow-entries

10 for previously encountered conversational flows, each

11 flow-entry identified by identifying information stored

12 in the flow-entry.

13   Now, you agree this requires storing

14 conversational flow-entries, right?

15   A.   It requires storing flow-entries for

16 previously encountered conversational flows. I believe

17 what it requires is that within the flow-entries, there

18 is information that can be used to create conversational

19 flows. I don't believe that the memory and the database

20 that has to be stored has to represent the

21 conversational flows themselves but include the

22 information that can be related -- that can relate the

23 flow-entries to each other.

24   Q.   But they don't need to actually be related,

25 there just has to be information where somebody could do

1 it, is that your testimony?

2   A.   My testimony is that what's required is what

3 the claim language says that you have highlighted, you

4 have to have the database, it has to have flow-entries,

5 those flow-entries can be or have to be for previously

6 encountered conversational flows if they're existing

7 flows as the -- the evidence in the analysis that I did

8 was to point to what's in that database and show that

9 performs that limitation for previously -- that you have

10 flow-entries for previously encountered conversational

11 flows.

12   Q.   But your analysis didn't include a

13 determination whether it actually identified or

14 classified it as a conversational flow; is that right?

15   A.   Well, it did. That was the whole example

16 where using entries from the flow record, it was able to

17 calculate the web page download time. So the existence

18 of analytics or metrics demonstrating that the

19 flow-entries were related to each other and relatable to

20 each other using information in the flow record shows

21 that the flow-entries were for previously encountered

22 conversational flows.

23   Q.   You mentioned the term "deep packet

24 inspection" in your testimony earlier?

25   A.   Yes, sir.

 1   Q.   And that's -- that's a broad term that just

 2 refers to looking into the contents of packets; is that

 3 right?

 4   A.   I believe what I've said in my deposition is

 5 it depends on the context. It can mean something fairly

 6 specific if used correctly. But if you just say, hey,

 7 do you know something about deep packet inspection, that

 8 can be a fairly general term.

 9   Q.   And you would agree that just because the

10 accused device may do deep packet inspection, that

11 doesn't mean it infringes the claims, right?

12   A.   No, if all I looked at was a document that

13 said deep packet inspection, I don't think I would be

14 correctly following my methodology.

15   Q.   Right. Because you -- just the fact that

16 you've stored information on connection flows, the fact

17 that you've looked deeply at the packets, that's not

18 enough to infringe a claim that requires that you

19 actually meet the conversational flow limitations; is

20 that right?

21   A.   I can't really answer that question. I -- I

22 think you're characterizing the patents in a way that I

23 disagree with.

24   What I can say is just deep packet inspection

25 by itself is not sufficient. You have to look at what

1 that means, what the products are actually doing.

2   Q.   And deep packet inspection existed before

3 these patents were filed, right?

4   A.   In a very general sense, yes. If deep packet

5 inspection means just looking into the data itself, yes.

6   Q.   So storing connection flows and doing a deep

7 analysis on packets with probes, that was all going on

8 before these patents were filed, right?

9   A.   In a very broad sense. I think when you get

10 into the details about how those probes work, it's not

11 quite that simple.

12   Q.   Now, the patents talk about linking connection

13 flows into a conversation flow; is that right?

14   A.   The patent does, yes.

15   Q.   And that linking, that's what you're referring

16 to as correlations between connection flows; is that

17 right?

18   A.   I think that would be a good example.

19   Q.   And in your testimony, you testified earlier

20 about an example in the accused products where you said

21 the web page download feature was a correlation; is that

22 right?

23   A.   That's one example.

24   Q.   And that's -- that's the example you testified

25 about today, right?

1   A.   It is. That was the example showing that

2 information in the flow record could be used to

3 correlate different connection flows to each other.

4 I -- sorry. I've testified that there -- or written

5 reports that there are other mechanisms as well in those

6 flow records.

7   Q.   The prior art, in your opinion, was not able

8 to make this link between connection flows, right?

9   A.   At a very high level, I think that's part of

10 what I've said.

11   Q.   You keep qualifying things at a very high

12 level. I really want just your actual opinion of is

13 it -- is it the case that the prior art was unable to

14 link conversation flow, that's the terminology used in

15 the patent.

16   THE COURT: Counsel, if you believe the

17 witness is non-responsive, you need to raise it with me.

18 You don't need to tell him that he's at too high a

19 level.

20   MR. LYONS: I apologize, Your Honor.

21   THE COURT: I'm happy to address it if

22 you'll raise it with the Court.

23   MR. LYONS: Thank you, Your Honor.

24   THE COURT: Let's proceed.

25   A.   I'm sorry. Can you repeat the question?

 1   Q.   (By Mr. Lyons)   Yes.   Would you agree that the

 2 prior art does not link, in your opinion,

 3 conversation -- connection flows into conversation

 4 flows?

 5   A.   Yes.

 6   Q.   Okay.   Now, do -- do any of the claims require

 7 storing conversion flows in the flow record, in your

 8 opinion?

 9   A.   I can't answer that.   I don't know what you

10 mean by that.

11   Q.   Well, you testified earlier that you didn't

12 think you actually had to store the conversational flow

13 in the flow database; is that right?

14   A.   No, that's not what I said.

15   Q.   Then -- well, what did you say?

16   A.   Well, what I said is you can have a flow-entry

17 database for previously encountered conversational

18 flows.   And what's required is in that flow-entry, you

19 have information that can be used to associate those

20 flow-entries with each other under the context of a

21 conversational flow.

22   As to whether or not what the specific

23 information has to be or whether there has to be

24 specific information that identifies the parts of the

25 conversational flow in the flow-entry, I don't believe

1 that's a requirement of any of the claims.

2   Q.   Well, let's talk about the flow database in

3 the accused products.   That's what you refer to as the

4 flow state block or the Fsb; is that right?

5   A.   Yes, sir.

6   Q.   And the -- and you -- you showed some exhibits

7 that showed flow records that correspond to the records

8 kept in the flow state block of the various flows; is

9 that right?

10   A.   Yes, I think that was Exhibit 223.

11   Q.   And each of those flow records is a connection

12 flow, right?

13   A.   They are connection flows and include

14 information that can be used for previously encountered

15 conversational flows.

16   MR. LYONS: Move to strike as

17 nonresponsive, Your Honor.

18   THE COURT: I'll overrule that.

19   Q.   (By Mr. Lyons)   So each entry in that Fsb

20 table is based on what you talked about earlier as the

21 5-Tuple for connection flow, correct?

22   A.   That's correct.   That's some of the

23 information.

24   Q.   And the flow state block does not include any

25 indication that any of the flows are correlated --

 1 doesn't say that this flow is specifically in a

 2 conversation with any other flow; is that right?

 3   A.   I can't answer that question. You asked two

 4 different things. I can answer the first --

 5   Q.   Let me -- let me rephrase.

 6   A.   Okay.

 7   Q.   Now, does the flow state block correlate

 8 connection flows?

 9   A.   No. It's a passive data structure. It

10 includes the information necessary to do so.

11   Q.   But the flow state block itself doesn't make

12 that correlation, correct?

13   A.   That's correct. It's a -- it's a passive data

14 structure.

15   Q.   And the correlation you testified about this

16 morning related to the web page download feature,

17 correct?

18   MR. SKIERMONT: I'm going to object to

19 the form. It's vague and ambiguous.

20   THE COURT: That's overruled.

21   Answer the question if you understand it,

22 Dr. Almeroth.

23   A.   I can't. It's too broad. I'm not sure what

24 you're -- I can go through and describe what I testified

25 to, but it -- I mean, that, I don't think accurately

1 characterizes what I said.

2   Q.   (By Mr. Lyons) Well, you just testified that

3 the flow state block stores connection flows, and that

4 the flow state block doesn't correlate those, right?

5   A.   That's correct, because it's a memory

6 structure. It includes the information that's

7 necessary.

8   Q.   And when you testified about what part of the

9 accused products you believe correlates the connection

10 flows, you testified about the web page download

11 feature, correct?

12   A.   No, that's not -- that's not what I was

13 testifying about.

14   Q.   You didn't -- so you don't think the web page

15 download correlates those connection flows?

16   A.   It's not an either/or. It's -- it's more

17 complex than what you're allowing me to describe. I can

18 certainly go through and explain it again. I think

19 you're -- you're mischaracterizing what I testified to.

20   Q.   Well, I'm just trying to understand what you

21 testified to.

22   THE COURT: Gentlemen, let's ask

23 questions and give answers. We don't need commentary

24 from either of you, all right?

25   MR. LYONS: Apologize, Your Honor.

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 1                    THE COURT:   That applies both ways.

 2                    THE WITNESS:   Yes, Your Honor.

 3                    THE COURT:   Let's go forward.

 4        Q.   (By Mr. Lyons)  Do -- now, the patents

 5   identify certain protocols that give rise to what it

 6   refers to as disjointed flows, right?

 7        A.   Yes.

 8        Q.   And it does not identify HTTP protocol as one

 9   that specifically gives rise to disjointed flows; is

10   that true?

11        A.   I think that's true.

12        Q.   And it doesn't specifically refer to the web

13   page download as an example of a case where you would

14   have a conversational flow; is that right?

15        A.   I think that also is right.

16        Q.   Now, when was the web page download KPI

17   feature first made available to Tektronix customers?

18        A.   I don't recall specifically.

19        Q.   Well, you -- you've identified -- at what time

20   did infringement begin, in your opinion, in this case?

21        A.   I believe it was by at least the end of 2010.

22        Q.   And do you know from 2010 to the present, was

23   the web page KPI feature available?

24        A.   I don't think it was available quite that

25   early.
```

 1   Q.   So your infringement is based in part on the

 2   products that simply did not have a web page KPI feature

 3   at all available, correct?

 4   A.   No, that's not true.

 5   Q.   Well, didn't you just say the feature was not

 6   available back in the 2010 time period?

 7   A.   Whether it is or isn't, I can explain, but I

 8   can't answer that question one way or the other. It

 9   requires an explanation.

10   Q.   Well, the question is simply whether some of

11   the accused products that you've identified as

12   infringing predated the existence of the web page

13   download KPI feature.

14   A.   I -- I believe that's true.

15   Q.   Now, the -- the web page download feature does

16   not alter how the flow state block operates; is that

17   right?

18   A.   I believe that's true.

19   Q.   And the web page download feature is actually

20   performed on a different chip than where the Fsb is --

21   is stored; is that correct?

22   A.   Yes.

23   Q.   And that's -- the web page download is on the

24   X86 chip; is that right?

25   A.   I can't answer that either yes or no. In some

1 instances, it's yes, but not all.

2   Q.   But it's on a different chip than the flow

3 state block in all instances?

4   A.   Yes.

5   Q.   Okay. And the web page download feature

6 doesn't send any information back to the flow state

7 block, right?

8   A.   I don't think so.

9   Q.   So it doesn't send back a message saying I've

10 done a correlation and I've identified certain flows as

11 being related in a conversational flow or anything like

12 that, right?

13   A.   That's correct. It's not necessary.

14   Q.   And whether the web page download feature is

15 present or not present, the flow state block operates in

16 exactly the same way, right?

17   A.   That's correct.

18   Q.   And so a customer can't -- if the flow state

19 block doesn't have information about which connection

20 flows are correlated, does it have any -- does it

21 provide any feature that would allow a customer to ask

22 which flows in this flow state block are -- are related

23 to one another as -- as a single conversation?

24   A.   I can't answer that question. The assumption

25 underlying your question is -- is false.

 1   Q.   So the question I'm asking is simply whether

 2 if I own one of these products and I'm using the

 3 software that's provided and I'm using it in a

 4 conventional way and I want to know, okay, of the -- the

 5 flow -- connection flows in the flow state block, is

 6 there any way for me to access -- get a message, these

 7 are the flows that are related to the other flows?

 8   A.   I -- I don't know. It -- it might be

 9 possible. But, again, that's not what's required for

10 infringement.

11   Q.   And that wasn't the basis of your infringement

12 analysis?

13   A.   I'm sorry. When you say "that," you mean a

14 user being able to access flow-entries and determine

15 conversational flows themselves?

16   Q.   Yeah, a user being able to tell which of the

17 connection flows stored in the accused products are

18 related as conversational flows?

19   A.   Correct. That was not a basis for what I

20 needed to find in order to determine that there was

21 infringement.

22   Q.   Now, the web page download is an optional

23 feature; is that right?

24   A.   That's correct.

25   Q.   And in order for that feature to even

1 function, the web page download KPI and the extended URL

2 features must be enabled. Otherwise, it won't operate

3 on the accused products; is that right?

4   A.   That's correct.

5   Q.   Now, you don't have any evidence of customers

6 actually using the web page KPI feature, do you?

7   A.   That's correct. That wasn't part of my task.

8   Q.   Instead, you relied -- for use, you relied on

9 an admission from Tektronix that it has used the

10 product -- the feature, right?

11   A.   That's correct. As -- as it was relevant to

12 the method claims.

13   Q.   Right. So what that admission was talking

14 about was used by Tektronix in, for example, testing or

15 in -- in other uses by the company itself, right?

16   A.   That's correct.

17   Q.   It wasn't talking about a customer using it;

18 is that right?

19   A.   That's correct.

20   Q.   And for a method claim, it's not enough that

21 the flow state block just have information that could be

22 correlated, it actually needs to be correlated, would

23 you agree with that?

24   A.   No, I don't think that the actual correlation

25 is a requirement of any of the asserted claims.

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 1        Q.    So if the flow state block only contains

 2  connection flows, and it never correlates them, that

 3  doesn't affect your opinion about whether it infringes

 4  these patents; is that right?

 5        A.    That's correct.  That's -- again, if -- I

 6  don't think that's a requirement of the claims.  I think

 7  what's required by the claims, I went through and

 8  analyzed in my direct examination.

 9                  MR. LYONS:  I pass the witness, Your

10  Honor.

11                  THE COURT:  Is there redirect?

12                  MR. SKIERMONT:  No, Your Honor.

13                  THE COURT:  You may step down, Dr.

14  Almeroth.

15                  THE WITNESS:  Thank you, Your Honor.

16                  THE COURT:  Counsel, approach the bench.

17                  (Bench conference.)

18                  THE COURT:  What's next up, Plaintiff?

19                  MR. DAVIS:  Your Honor, depositions.

20                  THE COURT:  How many have you got?

21                  MR. DAVIS:  We have three depositions.

22  Varying lengths.  I believe I've given the depositions

23  to -- a list of the depositions to Mr. Dunn, but --

24                  THE COURT:  Can you give me some idea?

25                  MR. DAVIS:  Yes, they're about an hour.
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 1                    MR. SKIERMONT:  About an hour.

 2                    MR. DAVIS:  About an hour and a half.

 3  So --

 4                    THE COURT:  Three depositions in total

 5  are about an hour and a half?

 6                    MR. DAVIS:  Total.  Yes, altogether.

 7                    THE COURT:  You can break it out by

 8  separate depositions?

 9                    MR. DAVIS:  Yes, sir.

10                    THE COURT:  Hang on a minute.

11                    So we've got John Curtin, about 30

12  minutes, followed by Kevin Keogh, about 15 minutes.

13                    MR. SKIERMONT:  Is there -- is Marwaha on

14  that list?

15                    THE COURT:  Yes.

16                    MR. SKIERMONT:  Yes.

17                    THE COURT:  That's listed as four -- 36

18  minutes.

19                    Well, I don't intend to do all of them,

20  but let's start with one of them of your choice, and

21  we'll go through them.  Okay?

22                    MR. DAVIS:  Yes.

23                    (Bench conference concluded.)

24                    THE COURT:  All right.  Plaintiff, call

25  your next witness.
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 1                    MR. DAVIS:  Your Honor, at this time,

 2   Plaintiff would call Mr. Samir Marwaha by deposition.

 3   And Mr. Marwaha is the senior director product line

 4   marketing services assurance at NetScout Systems.  And

 5   he was a corporate representative testifying on behalf

 6   of the company and was also testifying as individual

 7   capacity.

 8                    The length of this deposition is 36

 9   minutes and 51 seconds.  And the entire time is

10   allocated to the Plaintiff.

11                    THE COURT:  Proceed with the witness by

12   deposition.

13                    (Videoclip playing.)

14                    QUESTION:  Would you please state your

15   name and business address for the record?

16                    ANSWER:  Samir Marwaha.  NetScout.  3033

17   West George Bush Highway, Plano, Texas, 75075.

18                    QUESTION:  What exactly are your

19   responsibilities as -- as a product manager?

20                    ANSWER:  It's determined requirements in

21   the market and develop -- writing requirements for

22   engineer to execute on.

23                    QUESTION:  And what was your role with

24   respect to GeoProbe?

25                    ANSWER:  Defining product requirements.
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 1                    QUESTION:   How long has Iris been on the

 2  market?

 3                    ANSWER:   Since 2010.

 4                    QUESTION:   Were you involved with the

 5  development of Iris?

 6                    ANSWER:   I was defining requirements.

 7                    QUESTION:   And what was your role with

 8  respect to that project when you became a senior

 9  manager?

10                    ANSWER:   Senior director.   It was product

11  management, it was to define feature and functionality

12  of that product line.

13                    QUESTION:   And how did you go about doing

14  that for Iris specifically?

15                    ANSWER:   Speaking to customers.

16                    QUESTION:   Which customers?

17                    ANSWER:   Multiple.

18                    QUESTION:   Can you give me examples?

19                    ANSWER:   Verizon Wireless.   AT&T.

20                    QUESTION:   Any others you can recall?

21                    ANSWER:   Vodafone.   There are others I

22  don't know off the top of my head.

23                    QUESTION:   And what were the requirements

24  that you learned from them?

25                    ANSWER:   The requirements were around
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 1  technology turns, they were deploying 4G networks.
 2                  QUESTION:   And what did that mean for the
 3  industry?
 4                  ANSWER:   It meant for the industry new
 5  infrastructure, new protocols, new devices, new data
 6  services.
 7                  QUESTION:   Do you remember any specific
 8  features that these companies communicated to you?
 9                  ANSWER:   These companies communicated
10  general monitoring requirements.   The --
11                  QUESTION:   Such as what?
12                  Sorry.   Go ahead.
13                  ANSWER:   Well, we decided to convert
14  those requirements into specific features.
15                  QUESTION:   What kinds of general
16  monitoring requirements did they communicate to you?
17                  ANSWER:   They would want to get
18  visibility into all subscribers' sessions and calls for
19  the purpose of troubleshooting.   They would also tell us
20  what KPIs they needed to do performance management and
21  subscriber management.
22                  QUESTION:   And did you implement those
23  requirements?
24                  ANSWER:   Yes.
25                  QUESTION:   In Iris?
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 1                    ANSWER:  Yes.

 2                    QUESTION:  And Iris was first sold in

 3  2010?

 4                    ANSWER:  Yes.

 5                    QUESTION:  When you were promoted in

 6  2013, did you then acquire marketing responsibilities?

 7                    ANSWER:  Yes.

 8                    QUESTION:  What were your new marketing

 9  responsibilities?

10                    ANSWER:  It was product-specific

11  marketing, so product positioning, value propositions,

12  representation at trade shows, industry shows.

13                    QUESTION:  And -- and what were the

14  products that you were overseeing?

15                    ANSWER:  Iris.

16                    QUESTION:  Including the G10 probe?

17                    ANSWER:  Yes.

18                    QUESTION:  At that time, did you also

19  have responsibility for GeoProbe other versions?

20                    ANSWER:  Yes.

21                    QUESTION:  It should be Exhibit 4.

22  Okay.  This -- if you read the second paragraph, it

23  talks about a packet flow probe in the second sentence.

24                    Do you see that?

25                    ANSWER:  Yes.
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 1                    QUESTION:  And it goes on in the next

 2  sentence to talk about the packet flow probe approach.

 3                    Do you see that?

 4                    ANSWER:  Yes.

 5                    QUESTION:  What do you understand that

 6  term to mean?

 7                    ANSWER:  Packet -- packet-based

 8  monitoring.

 9                    QUESTION:  Is that a term that you use in

10  marketing NetScout's products?

11                    ANSWER:  Yes.

12                    QUESTION:  And what does the flow aspect

13  of that denote to you?

14                    ANSWER:  To me personally?

15                    QUESTION:  Well, you as -- as a marketing

16  manager.

17                    ANSWER:  So packets, we break it in --

18  in -- or marketing or value proposition, we break it

19  into capturing and flow and session, and then ultimately

20  application.

21                    QUESTION:  And you -- can you explain to

22  me the difference among the four?

23                    ANSWER:  Sure.  So packet capturing,

24  which differentiates us because we're actually looking

25  at every single packet in the network.  Then there's
```

1 packet flows, which is we generate flows based on a

2 block of packets. And then we correlate them to

3 individual session by a subscriber, so it's

4 session-based information. And then we take it through

5 an application for troubleshooting or performance

6 purpose.

7   QUESTION: Of the four aspects that you

8 just described, which is the most basic?

9   ANSWER: It's capturing.

10   QUESTION: And next up is flow?

11   ANSWER: Yes.

12   QUESTION: And then session?

13   ANSWER: Yes.

14   QUESTION: And then finally application?

15   ANSWER: Yes.

16   QUESTION: And are all four of these

17 functions a part of NetScout's product currently?

18   ANSWER: Yes.

19   QUESTION: What about deep packet

20 classification?

21   ANSWER: Yes.

22   QUESTION: What does that mean?

23   ANSWER: At NetScout it means analyzing

24 the packet and classifying it and what it is or what

25 service it's carrying.

1   QUESTION: What do you mean by what

2 service it's carrying?

3   ANSWER: An example would be YouTube.

4   QUESTION: Is that a functionality that

5 certain products have at NetScout?

6   ANSWER: Yes.

7   QUESTION: And how is that accomplished

8 from a technical standpoint?

9   ANSWER: From a technical standpoint, we

10 use libraries from a third party which does the analysis

11 and classification.

12   QUESTION: And what is that third party?

13   ANSWER: Procera Networks.

14   QUESTION: And what is the term used to

15 describe the library or the functionality?

16   ANSWER: DPC libraries, deep packet

17 classification libraries.

18   QUESTION: What additional capability is

19 gained from DPC?

20   ANSWER: It adds classification services.

21   QUESTION: So prior to DPC, there were no

22 classification services on these probes?

23   ANSWER: There were basic

24 classifications, but it adds -- it enhances that

25 capability.

```
 1                    QUESTION:  Okay.  Exhibit 7 bears the

 2  Bates range -- or rather it starts with the Bates No.

 3  NetScout 007052 and ends with NetScout 007153.

 4                    So if you would turn to the second page

 5  of that document -- third actually.

 6                    This appears to be a Securities and

 7  Exchange Commission document, right?

 8                    ANSWER:  Yes.

 9                    QUESTION:  Filing, right?  And it's

10  called Form 10-K, if you see it up at the top, right?

11                    ANSWER:  Yes.

12                    QUESTION:  Are you familiar with this

13  type of document?

14                    ANSWER:  Yes.

15                    QUESTION:  If you would turn to the 12th

16  page, which is Page 10, the Bates number is NetScout

17  007063, there is a sub-heading called Customers.  Do you

18  see that?

19                    ANSWER:  Yes.

20                    QUESTION:  And would you please read that

21  to yourself?

22                    ANSWER:  Yes.

23                    QUESTION:  Is that an accurate

24  articulation of who NetScout's customers are?

25                    ANSWER:  Yes.
```

1   QUESTION: Okay. Going back further --

2 or going down further to Competition, that goes on to

3 the next page, would you please review that section?

4   ANSWER: Okay.

5   QUESTION: Is that an accurate reflection

6 of NetScout's competition?

7   ANSWER: Yes.

8   QUESTION: What, if any, relationship

9 does Iris have to the GeoProbe family?

10   ANSWER: Iris is the framework of all

11 applications on GeoProbe family.

12   QUESTION: And when you say framework,

13 does that mean that it is the software?

14   ANSWER: Yes.

15   QUESTION: Exhibit 10 has the Bates stamp

16 NetScout 000035. It's a one-page document.

17   Do you recognize this document?

18   ANSWER: Yes.

19   QUESTION: What is it?

20   ANSWER: It's a slide from a presentation

21 deck.

22   QUESTION: What does it show?

23   ANSWER: It's -- the intent is to show

24 how the integration would be done between Iris probe and

25 some NG application.

```
 1                    QUESTION:   What's an NG application?

 2                    ANSWER:   The new NetScout branding,

 3  nGenius One.

 4                    QUESTION:   And what is an Iris probe?

 5                    ANSWER:   It could be a G10 probe, which

 6  in this case it is.

 7                    QUESTION:   When did this integration take

 8  place?

 9                    ANSWER:   It started right after

10  acquisition.   I wouldn't know the exact date.

11                    QUESTION:   Is it an ongoing effort?

12                    ANSWER:   Yes.

13                    QUESTION:   And there is a box called flow

14  state additional processing complex features.   Do you

15  see that?

16                    ANSWER:   Yes.

17                    QUESTION:   What does that refer to?

18                    ANSWER:   Essentially, as I mentioned

19  before, there is packets, then capture, then there's

20  flow, then there's session and application.   So this is

21  the flow state where you are creating -- aggregating

22  packets and creating a flow.

23                    QUESTION:   In the -- the other card,

24  there is a flow processor.   Do you see that, under KPI

25  Generator?
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 1                    ANSWER:  Yes.

 2                    QUESTION:  What is that?

 3                    ANSWER:  This is to generate KPIs from

 4  the flow.

 5                    QUESTION:  Do you recognize Exhibit 11?

 6                    ANSWER:  Yes.

 7                    QUESTION:  And for the record, that is a

 8  document beginning with NetScout 013058.  It's a 19-page

 9  document.  And what is this document?

10                    ANSWER:  It's a products requirements

11  document.

12                    QUESTION:  What's the date on it?

13                    ANSWER:  February 10th, 2009.

14                    QUESTION:  What product is it for?

15                    ANSWER:  It's for XDRs, data records.

16                    QUESTION:  And that's s portion of the

17  Iris framework?

18                    ANSWER:  Yes.

19                    QUESTION:  Before the break we talked

20  about a product or -- or functionality rather called

21  Iris Session Analyzer.  Do you remember that?

22                    ANSWER:  Yes.

23                    QUESTION:  Did that incorporate deep

24  packet classification?

25                    ANSWER:  Yes.
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 1                    QUESTION:   Is that primarily where it's

 2 incorporated or --

 3                    ANSWER:   It's one of the places it's

 4 incorporated.

 5                    QUESTION:   One of the places.  And it is

 6 a document beginning with the Bates stamp NetScout

 7 012984.   Do you recognize this document?

 8                    ANSWER:   Yes.

 9                    QUESTION:   What is it?

10                    ANSWER:   Installation guide.

11                    QUESTION:   For what product?

12                    ANSWER:   G10.

13                    QUESTION:   And it's Version 7.10.1,

14 right?

15                    ANSWER:   Yes.

16                    QUESTION:   So approx -- approximately

17 when would this have been?

18                    ANSWER:   Approximately 2010.

19                    QUESTION:   What -- who would be the

20 intended audience for this document?

21                    ANSWER:   This would be for service and

22 delivery organization who installed the equipment.

23                    QUESTION:   So is that a division in

24 NetScout?

25                    ANSWER:   Yes.
```

 1   QUESTION: And are there technicians that

 2 implement the systems in a customer?

 3   ANSWER: Yes.

 4   QUESTION: And how long does that process

 5 take typically?

 6   ANSWER: It can vary significantly.

 7   QUESTION: More than a couple of days?

 8   ANSWER: Just the installation?   For this

 9 product you have in front of me, couple of days.

10   QUESTION: And once it's installed, is

11 there training offered --

12   ANSWER: Yes.

13   QUESTION: -- to the customer?   What kind

14 of training?

15   ANSWER: We have quick-start training

16 where they can start getting value from the system.

17 Then there's formal training courses.   A customer can

18 sign up.

19   QUESTION: And all of that is provided by

20 the service delivery organization?

21   ANSWER: That's correct.

22   QUESTION: And once training takes place,

23 is there then ongoing support offered?

24   ANSWER: Yes.

25   QUESTION: And which organization is

```
 1  responsible for that?

 2                  ANSWER:  Same.

 3                  QUESTION:  Is there a limit on how long

 4  you offer support?

 5                  ANSWER:  Yes.

 6                  QUESTION:  What is the -- what is the

 7  limit or typical limit?

 8                  ANSWER:  Can you clarify the question,

 9  whether it's hard -- software support or --

10                  QUESTION:  Let's begin with software,

11  sure.

12                  ANSWER:  It's -- it's offered for two of

13  the VISAs behind the current one.

14                  QUESTION:  And what about for hardware?

15                  ANSWER:  Every customer has a different

16  requirement, but we support hardware for very long time.

17  I wouldn't know the exact time.

18                  QUESTION:  So it's possible to, for

19  example, use the Iris framework without purchasing the

20  probes?

21                  ANSWER:  No.

22                  QUESTION:  What about Session Analyzer?

23                  ANSWER:  The customer can choose not to

24  buy it.

25                  QUESTION:  But is it -- is it sold
```

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 1  independent of selling a probe?

 2                    ANSWER:  Yes.

 3                    QUESTION:  Okay.  I'm going to introduce

 4  the next document.  This is going to be Exhibit 16,

 5  beginning with the Bates stamp NetScout 006734.

 6                    Do you recognize this document?

 7                    ANSWER:  Yes.

 8                    QUESTION:  What is it?

 9                    ANSWER:  It's a kickoff deck.

10                    QUESTION:  For what?

11                    ANSWER:  For a sales kickoff.

12                    QUESTION:  Would you please go to Page 8?

13  And what does this page show?

14                    ANSWER:  It's showing the timeline and

15  how our hardware and processing has evolved.

16                    QUESTION:  From first quarter 2013

17  through third quarter 2014?

18                    ANSWER:  Correct.

19                    QUESTION:  And about midway through, you

20  see something that says "flow processing," do you see

21  that?

22                    ANSWER:  Yes.  Yes.

23                    QUESTION:  And next to that, one of the

24  items is "adapt flow processing"?

25                    ANSWER:  Yes.
```

```
 1                    QUESTION:   Do you understand what that

 2  means in that context?

 3                    ANSWER:   Very high level.

 4                    QUESTION:   And what would that be?

 5                    ANSWER:   That -- that blade, we have a

 6  flow processing blade, and GeoBlade is essentially

 7  creating those flows from packets.

 8                    QUESTION:   Exhibit 17 is a document

 9  beginning with NetScout 013725.   And let me know when

10  you have it.

11                    Do you recognize this document?

12                    ANSWER:   Can I flip it?   There.   Yes.

13                    QUESTION:   What is it?

14                    ANSWER:   It's typically introduced to the

15  sales team from product management.

16                    QUESTION:   And this one introduces

17  GeoBlade?

18                    ANSWER:   Yes.

19                    QUESTION:   If you would go to Page 5.

20                    ANSWER:   Okay.

21                    QUESTION:   That -- that -- the section

22  that begins on that page is entitled Introducing

23  GeoProbe GeoBlade, right?

24                    ANSWER:   Yes.

25                    QUESTION:   And the GeoProbe there refers
```

```
 1  to the brand family?

 2              ANSWER:  Yes.

 3              QUESTION:  If you turn to the next page,

 4  what does the diagram on this page show?

 5              ANSWER:  It's showing the steps necessary

 6  in a monitoring function.

 7              QUESTION:  In any monitoring function?

 8              ANSWER:  Monitoring functions in our

 9  probe.

10              QUESTION:  In the versions that are

11  marketed at this time?

12              ANSWER:  For GeoProbe family.

13              QUESTION:  And does this accurately

14  reflect the functionality of -- of the probes at this

15  time, of the GeoProbe family at this time?

16              ANSWER:  Yes.

17              QUESTION:  What does microflow analysis

18  mean?

19              ANSWER:  It typically refers to once you

20  have gotten the flows from the packets, you assign

21  specific time stamps to them, so you can -- they can be

22  aggregated at a microlevel.

23              QUESTION:  And what does the -- the term

24  "state-machine correlation" mean?

25              ANSWER:  This is when we, as I call it,
```

```
 1 stitch together different protocols related to a

 2 specific subscriber session as the call traverses the

 3 network.

 4               QUESTION:  And how is that accomplished?

 5               ANSWER:  In a software, state machine

 6 software.

 7               QUESTION:  What -- what about control and

 8 user flow session records, what does that refer to?

 9               ANSWER:  Control plane refers to

10 signaling, and user plane refers to the actual media.

11               QUESTION:  The user flow session records?

12               ANSWER:  Yes.

13               QUESTION:  What's the functionality that

14 allows correlating sessions?

15               ANSWER:  Yes.  The functionality is to

16 correlate different protocols, different interfaces into

17 a single subscriber session.

18               QUESTION:  For the physical probes, where

19 does the manufacture take place?

20               ANSWER:  For which probe?

21               QUESTION:  Let's talk about the GeoProbe

22 family.

23               ANSWER:  The assembly is done in Plano.

24               QUESTION:  At NetScout?

25               ANSWER:  Yes.
```

1   QUESTION: And I believe you said that

2   there -- that in the -- the GeoProbe family, that there

3   is a particular blade responsible for creating flows

4   from traffic; is that right?

5   ANSWER: Yes.

6   QUESTION: And what -- what is that

7   referred to as?

8   ANSWER: IFP.

9   QUESTION: Which stands for?

10   ANSWER: Iris flow processor.

11   QUESTION: What is your understanding of

12 what "flow" means in that context?

13   ANSWER: Aggregation of packets.

14   QUESTION: You also mentioned the word

15 "session" and the phrase "session correlation."   What

16 does session mean in that context?

17   ANSWER: To an individual subscriber

18 conducting a session, whether data session, messaging,

19 or voice.

20   QUESTION: Since 2010, what network

21 monitoring technology has been sold by NetScout?

22   ANSWER: 2010, we introduced G10.   And

23 2014, we introduced GeoBlade.   And that was prior to the

24 acquisition by -- that was prior to the acquisition by

25 NetScout.

```
 1                    QUESTION:   Have you heard of the term

 2  "DPC"?

 3                    ANSWER:   Yes.

 4                    QUESTION:   What does that stand for?

 5                    ANSWER:   Deep packet classification.

 6                    QUESTION:   And what is that?

 7                    ANSWER:   It's essentially our capability

 8  to classify traffic into services.

 9                    QUESTION:   And -- and that was developed

10  by the Tektronix side of the business, correct?

11                    ANSWER:   It was embedded by Tektronix's

12  side of the business available from a third party.

13                    QUESTION:   And that third party is

14  Procera; is that correct?

15                    ANSWER:   Yes.

16                    QUESTION:   Do you recognize that

17  document?

18                    ANSWER:   Yes.

19                    QUESTION:   What is that?

20                    ANSWER:   It's one of our strategic plans.

21                    QUESTION:   Did you create this document?

22                    ANSWER:   I contributed to this document.

23                    QUESTION:   Well, this strategic plan is

24  labeled FY 2011 through FY 2013, correct?

25                    ANSWER:   Correct.
```

```
 1                    QUESTION:   So would this have been

 2  presented in 2011?

 3                    ANSWER:   Fiscal -- this is a fiscal year

 4  2011, yes.

 5                    QUESTION:   If you would turn to Page 7,

 6  please.

 7                    What does this slide show?

 8                    ANSWER:   It's essentially if any market

 9  dynamics have changed from the prior year.   Every year

10  we evaluated external market drivers and what would it

11  imply to us to win in this market.

12                    QUESTION:   And the very first one says:

13  Emergence of application driven buying.

14                    Do you see that?

15                    ANSWER:   Yes, yes.

16                    QUESTION:   What does that refer to?

17                    ANSWER:   Essentially, what we noticed in

18  our customers' behavior was there was a desire to

19  purchase monitoring solutions based on their return on

20  investment from software applications rather than just

21  troubleshooting.

22                    QUESTION:   When -- when you say

23  "troubleshooting," what exactly are you referring to?

24                    ANSWER:   Historically, these monitoring

25  solutions were primarily bought for getting visibility
```

1 into the traffic and identifying problem areas and

2 solving them. The software applications, our

3 application driven buying was towards emerging trend

4 where they would purchase the monitoring solution, not

5 just for identifying problems but looking for impact to

6 their end customers.

7   QUESTION: What do you mean by "impact to

8 their end customers"?

9   ANSWER: Essentially, if I was a service

10 provider and had a problem with a network, there was a

11 desire to see which subscribers that problem had impact

12 on.

13   QUESTION: Is it only related to

14 problems, or is there other possibilities for

15 visibility?

16   ANSWER: In our business for service

17 assurance, it was typically quality issues, quality

18 experience, quality of service.

19   QUESTION: And so linking the traffic to

20 particular subscribers was important; is that fair?

21   ANSWER: Yes.

22   QUESTION: And that's based on what you

23 had learned from the customers?

24   ANSWER: From customers and the RFPs they

25 were releasing.

 1   QUESTION: And is it fair to say that the

 2 more specific information you could give about each

 3 subscriber, the better for the product?

 4   ANSWER: Only in terms of quality,

 5 quality impact to the subscriber -- quality impact to

 6 the subscribers.

 7   QUESTION: And that might vary by

 8 customer to customer, correct?

 9   ANSWER: Depending on what they wanted to

10 monitor, yes.

11   QUESTION: So is it fair to say that at

12 this period of time, that was one of the -- the primary

13 opportunities for the company?

14   ANSWER: That was our thinking, yes.

15   QUESTION: This is going to be Exhibit 3.

16 Do you recognize this document?

17   ANSWER: Yes.

18   QUESTION: What is this?

19   ANSWER: It's a strategic plan the

20 following year.

21   QUESTION: So Page 3, and this slide

22 identifies certain market opportunities, correct?

23   ANSWER: Yes.

24   QUESTION: As well as drivers and

25 implications?

```
 1                    ANSWER:  Yes.

 2                    QUESTION:  And what does "drivers and

 3   implications" mean?

 4                    ANSWER:  What are the things that are

 5   driving the market to behave in a certain fashion and

 6   what -- what implication it has on -- on Tektronix at

 7   the time.

 8                    QUESTION:  Okay.  And the third one there

 9   under drivers and implications says:  Internet social

10   media has redefined customer intimacy and carriers are

11   now -- sorry.  Customer intimacy and carriers are now

12   adopting similar initiatives to increase the level of

13   personalization with their subscribers in an attempt to

14   grow revenue.

15                    What is meant by that statement?

16                    ANSWER:  The intent of that statement was

17   that our service provider customers were trying to catch

18   up to social media companies, such as Facebook, Google,

19   and other companies that came from Internet domain, and

20   they noticed how quickly those companies were getting

21   sticky with end subscribers, and they wanted to be in

22   the same game.

23                    QUESTION:  What do you mean by sticky?

24                    ANSWER:  Sticky meaning the service --

25   the end users or subscribers were utilizing those social
```

 1 media services heavily.

 2   QUESTION: And what -- how does the level

 3 of personalization play into that?

 4   ANSWER: Service providers traditionally

 5 had been simply service -- providing services to large

 6 group of subscribers with no personalization. For

 7 example, they offer same voice service to everybody or

 8 same data service to everybody. This would get -- the

 9 -- the thinking was they wanted to be more in a

10 personalized domain. They wanted to know you as a

11 subscriber, what were your needs and what can they up

12 selling and so they wanted to get more personalized

13 services towards each individual.

14   QUESTION: So how -- how could that help

15 them grow revenue?

16   ANSWER: The thinking was that if they

17 could target the right subscribers and sell them -- up

18 sell them or cross sell them services, they could

19 increase their revenue.

20   QUESTION: And would that be based on,

21 for example, subscriber activity?

22   ANSWER: As an example, yes.

23   QUESTION: And so how old Tektronix's

24 product help with that?

25   ANSWER: Tektronix could only give them

1 visibility on -- to the individual subscriber's behavior

2 and usage, including the subscriber's location, so some

3 key information that service provider could use.

4   QUESTION: And so based on this being a

5 driver, what steps did NetScout take -- sorry, Tektronix

6 take to address that need in the market?

7   ANSWER: So I believe the strategic plan

8 highlights the initiatives we undertook to address these

9 drivers.

10   So when you -- I'll get to Page 14.   I

11 think it stopped.

12   QUESTION: Okay.

13   ANSWER: But if you look at -- in the

14 table of contents, the third section on Initiative No.

15 1, broadband core network monitoring, access network

16 monitoring, personalized services, and professional

17 services, so these were the initiatives that Tektronix

18 undertook to help with those drivers.

19   QUESTION: And so under personalized

20 services, usage-based monitoring and analytic solution

21 was among those initiatives that -- that Tektronix took

22 in response to that market need, correct?

23   ANSWER: Yes.

24   QUESTION: And if you turn to Page 19,

25 that slide goes into more detail about how to -- how

1 Tektronix sought to accomplish that, correct?

2   ANSWER: Correct.

3   QUESTION: And who do you consider to be

4 the largest customers?

5   ANSWER: Each region has -- has their

6 own, so I can give you examples. For example, in North

7 America, it will be AT&T, Verizon, T-Mobile, Comcast.

8   In Europe, it would be Vodafone

9 Properties, Deutsche Telekom -- Deutsche Telekom. Asia

10 it will be Telstra.

11   QUESTION: When you say that you provided

12 information about uptake of DPC by our customers, what

13 do you mean by that?

14   ANSWER: He wanted to know how our

15 customers were -- how -- how much they were valuing DPC

16 or if there was any value to provide DPC.

17   QUESTION: And what did you tell them?

18   ANSWER: We were -- we gave him the

19 factual information, how much we had sold or in most

20 cases had to give away DPC to sell the larger solution.

21   QUESTION: So your conclusion was that it

22 was valuable to provide DPC?

23   ANSWER: It was valuable to provide DPC

24 but not necessarily monetary terms for DPC itself, but

25 as part of a larger solution.

```
 1                   QUESTION:   It was something that might

 2  convince a customer to buy a solution?

 3                   ANSWER:   Yes.

 4                   QUESTION:   And does that continue to be

 5  true today?

 6                   ANSWER:   Is it true that we're -- our

 7  customers still value DPC?   Yes.

 8                   QUESTION:   If you would turn to Page 20.

 9                   And that slide talks about Iris traffic

10  analyzer, correct?

11                   ANSWER:   Hang on just s second.

12                   QUESTION:   Sure.

13                   ANSWER:   Yes.

14                   QUESTION:   And the second larger bullet

15  point says:   Utilizes data from GeoProbe G10, right?

16                   ANSWER:   Yes.

17                   QUESTION:   And -- and one of the points

18  under that -- the first point is:   Measures, finds

19  alarms on expansive L2 to L7 IP metrics, correct?

20                   ANSWER:   Yes.

21                   QUESTION:   And so at that time period,

22  the G10 wasn't able to accomplish that, correct?

23                   ANSWER:   I believe that was the intent

24  for it to accomplish that, yes.

25                   QUESTION:   And looking at Page 24
```

1 entitled The G10 Advantage.

2   ANSWER: Yes.

3   QUESTION: And this lists out additional

4 features that the G10 was able to do in this time

5 period, correct?

6   ANSWER: Yes.

7   QUESTION: Let's go to the next exhibit,

8 Exhibit 8.   And let me know when you-all have it.

9   Do you recognize this document?

10   ANSWER: Yes.

11   QUESTION: What is this?

12   ANSWER: This is for -- for a release

13 12 -- 7.12.2.   It's a guide -- it's a user guide.

14   QUESTION: Do you know approximately what

15 time period that would have been?

16   ANSWER: That would have been 2012.

17   QUESTION: The year. Okay. And this

18 would have been a customer-facing document, right?

19   ANSWER: It's customers/users would use

20 this document, yes.

21   QUESTION: This is a portion of -- of the

22 user guide that refers to traffic classification, right?

23   ANSWER: Yes.

24   QUESTION: And if you look at the bottom

25 of the page, do you see the -- the footer that says AT&T

```
 1  control number, and then there's a number?  Do you see

 2  that?

 3                    ANSWER:  Yes.

 4                    QUESTION:  Do you know what that refers

 5  to?

 6                    ANSWER:  That would have been if it was

 7  shared -- this document was shared with AT&T.

 8                    QUESTION:  It would then have been marked

 9  with a control number?

10                    ANSWER:  Yes.

11                    QUESTION:  So going back to this section,

12  it talks about traffic classification overview, right?

13                    ANSWER:  Yes.

14                    QUESTION:  That's the first subheading?

15                    ANSWER:  Yes.

16                    QUESTION:  And it talks about traffic

17  classification for ITA and ISA.  Do you see that?

18                    ANSWER:  The last bullet or --

19                    QUESTION:  No, it's actually the very

20  first paragraph.

21                    ANSWER:  Yes, yes.

22                    QUESTION:  And it says:  Tektronix

23  Communications supports traffic classification for ITA

24  and ISA.  Right?

25                    ANSWER:  Yes.
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```
 1                    QUESTION:   And does that refer to Iris

 2  Traffic Analyzer and Iris Session Analyzer?

 3                    ANSWER:   Yes.

 4                    QUESTION:   All right.   You can exit out

 5  of that one and go to the next document, which is

 6  Exhibit 11.

 7                    Do you recognize that document?

 8                    ANSWER:   I have seen this before, yes.

 9                    QUESTION:   What is it?

10                    ANSWER:   Customer training catalog.

11                    QUESTION:   What was the purpose of this

12  document?

13                    ANSWER:   Essentially very high level

14  description of what our training can provide to our

15  customers.

16                    QUESTION:   So is there a price list that

17  exists for either what's described in this document or

18  the current version or both?

19                    ANSWER:   At the time for this, again,

20  there was a suggested price to the sales team, and the

21  sales force that would select it as -- as an option, and

22  it's still true.   It's still true.   But options are

23  different, but it is priced.

24                    QUESTION:   So sitting here today, you

25  can't testify as to any knowledge that the Tektronix
```

1 side of NetScout has with respect to RMON; is that

2 correct?

3   ANSWER: I have been with Tektronix since

4 '98, and I've never heard of RMON, so...

5   QUESTION: And just so that my question

6 is clear, you sitting here today as a representative of

7 the Tektronix side of NetScout have no awareness of the

8 RMON Working Group; is that correct?

9   ANSWER: That's correct.

10   QUESTION: And you also have no awareness

11 of what RMON in general is; is that correct?

12   ANSWER: That's correct.

13   QUESTION: If RMON was relevant to

14 network monitoring technology, would you know about it?

15   MR. ATTORNEY: Objection, form.

16   ANSWER: If it was relevant to our

17 customers, I would have known about it.

18   (Videoclip ends.)

19   THE COURT: Does that complete this

20 witness by deposition?

21   MR. DAVIS: It does, Your Honor.

22   THE COURT: Call your next witness by

23 deposition.

24   MR. DAVIS: Your Honor, Plaintiffs call

25 Colin Lindahl, former senior finance and accounting

 1 director at NetScout Systems. He was a 30(b)(6) witness

 2 on sales and finance. The length of the deposition is

 3 21 minutes and 29 seconds. All time for the Plaintiff.

 4   THE COURT: All right. Let's proceed

 5 with the witness by deposition.

 6   (Videoclip playing.)

 7   QUESTION: Would you please state your

 8 name and address for the record?

 9   ANSWER: Colin Lindahl. 7812 La Cosa

10 Drive, Dallas, Texas, 75248.

11   QUESTION: You also mentioned

12 professional services. What did you mean by that?

13   ANSWER: There's a -- there are a few

14 different offerings. One is that sometimes a customer

15 will pay us to use our own equipment to monitor the

16 network to do an analysis, a study, to help them solve

17 some sort of issue. And the other one is that we have a

18 business where we monitor -- where we test cell phone

19 towers, network-planning-type work.

20   QUESTION: What kind of equipment might

21 they need?

22   ANSWER: Well, for example, they might

23 take one of our own probes and go into a network to

24 perform service.

25   QUESTION: Speaking about the probes that

1 we've been referring to as accused products, how exactly

2 are they sold to customers?

3   ANSWER: They're typically sold as part

4 of what I would call a solution sale.

5   QUESTION: And what do you mean by that?

6   ANSWER: The customer will have a certain

7 amount and a certain type of traffic that need

8 monitored, and they will come to us asking for our

9 solution to monitor that traffic.

10   QUESTION: And so for any given solution,

11 there might be differing types, as well as different

12 numbers of probes; is that fair?

13   ANSWER: Yes, that's fair.

14   QUESTION: And as part of a solution,

15 does NetScout also sell software?

16   ANSWER: Yes.

17   QUESTION: And is there a separate charge

18 to the customer for the software?

19   ANSWER: Yes.

20   QUESTION: When you prepared those

21 numbers for the probes for this litigation that we've

22 been talking about, did you include the charge to the

23 customer for the software?

24   ANSWER: I included the -- the hardware

25 and then software essential to running the probe.

1   QUESTION: So you did not include the

2 nonessential software charges within that revenue?

3   ANSWER: Correct.

4   QUESTION: Can you identify any of those

5 essential software offerings sitting here today?

6   ANSWER: Yes.

7   QUESTION: What are they?

8   ANSWER: It's what we call the IrisView

9 suite. So it's something called for the Iris Traffic

10 Analyzer, IPA which is the Protocol Analyzer, and then

11 the ISA which is the Session Analyzer.

12   QUESTION: Anything else that you

13 remember?

14   ANSWER: In the Salesforce data set I

15 think there's something called base probe software, so I

16 included that, as well. That should have been it.

17   QUESTION: Are -- are any of the probes

18 ever sold without any software?

19   ANSWER: No, not to my -- not to my

20 knowledge.

21   QUESTION: You should have in front of

22 you a document marked Exhibit 4. If you would open that

23 up, please.

24   ANSWER: One moment.

25   It's open.

 1   QUESTION: Do you recognize this

 2 document?

 3   ANSWER: Not specifically.

 4   QUESTION: Do you recognize the format of

 5 it?

 6   ANSWER: It looks like a quote or a bid

 7 document.   I have to scroll through it.   I believe the

 8 question was do I recognize the form.   I do recognize

 9 the form of this, yes.

10   QUESTION: And what is it?

11   ANSWER: It looks like a basic -- I think

12 we call it a bid document.

13   QUESTION: For this proposed solution,

14 what is the software included within that proposal?

15   ANSWER: I would say it's what's above

16 the -- in the picture on Page 8, it's the analyzer tool

17 set, those are the ones I mentioned earlier, the ISA,

18 ITA, and IPA.   Then the other one off to the side is

19 IPI.

20   QUESTION: And IPI is one of the

21 stand-alone solutions that we talked about?

22   ANSWER: It can be.

23   QUESTION: In this case, it would have

24 been an additional charge over the analyzer tool set; is

25 that correct?

```
 1                    ANSWER:  Yes.

 2                    QUESTION:  And I believe you testified

 3  earlier that you did not include revenue from IPI in the

 4  numbers you've presented, correct?

 5                    MR. ATTORNEY:  Objection.

 6                    ANSWER:  Correct.

 7                    QUESTION:  And what is the difference at

 8  NetScout between enterprise customers and service

 9  provider customers?  Why do you classify them the way

10  that you do?

11                    ANSWER:  These -- service provider is --

12  these are network -- these are carriers.  We define

13  things by vertical, and this vertical is specifically

14  the carrier service provider space, fixed and wireless.

15                    QUESTION:  And what about enterprise, how

16  would you describe those customers?

17                    ANSWER:  In general, I would describe it

18  as that which is not a service provider, that which is

19  want a carrier, fixed or cellular.

20                    QUESTION:  The numbers that you've

21  provided for this litigation, did you include revenue

22  from both categories of customers?

23                    ANSWER:  The revenue provided is only

24  from the service provider segment.

25                    QUESTION:  Does NetScout charge any
```

1 maintenance or fees associated with supporting the

2 software?

3   ANSWER: Yes.

4   QUESTION: And what is that charge?

5   ANSWER: Can you be more specific as to

6 which part of NetScout and which charges?

7   QUESTION: Well, we're talk specifically

8 with respect to the accused technology and associated

9 software.

10   So with that clarification, does -- does

11 NetScout charge any maintenance or fees associate --

12 associated with supporting the software or the product?

13   ANSWER: Yes.

14   QUESTION: And how are those fees

15 assessed?

16   ANSWER: Those are negotiated on a --

17 really a customer-by-customer basis.

18   QUESTION: Did you include the

19 maintenance fees in the revenue for the purposes of your

20 calculations for this -- for this litigation?

21   ANSWER: No, I had excluded those.

22   QUESTION: Why did you exclude them?

23   ANSWER: Because to me those are -- that

24 was my interpretation of what the accused products'

25 instrumentalities are.

```
 1                    QUESTION:  Your -- your interpretation
 2  was to exclude the fees associated with maintenance?
 3                    ANSWER:  By ex -- my interpretation was
 4  to include the hardware and essential software related
 5  sales.
 6                    QUESTION:  But exclude everything else?
 7                    ANSWER:  It depends what you mean
 8  everything else.
 9                    QUESTION:  Well, is there anything else
10  that you included, other than the hardware and essential
11  software sales?
12                    ANSWER:  That's -- is there anything else
13  I included?
14                    QUESTION:  Yes.
15                    ANSWER:  No, that's -- that's what I
16  included.
17                    QUESTION:  Right.  So we've -- we've
18  talked about certain fees associated with supporting
19  software in customer solutions, correct?
20                    ANSWER:  Yes.
21                    QUESTION:  Is there an equivalent for
22  hardware maintenance?
23                    ANSWER:  Yes.
24                    QUESTION:  And is that a separate fee
25  from the software fees that we've been talking about?
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 1                    ANSWER:  You're talking specifically

 2  about the maintenance?

 3                    QUESTION:  Yes.

 4                    ANSWER:  It's typically bundled together.

 5                    QUESTION:  And to be clear, that was not

 6  included in the revenue numbers that you prepared for

 7  this case, correct?

 8                    ANSWER:  Correct.

 9                    QUESTION:  And so to be clear, what was

10  included in the quarterly reporting was some subset of

11  G10 and GeoBlade sales; is that correct?

12                    ANSWER:  That is correct.

13                    QUESTION:  And who determined what that

14  subset was?

15                    ANSWER:  I'm not sure.  I saw the

16  finished document.  I did not -- I don't know who

17  produced it.

18                    QUESTION:  So you don't know how that

19  subset of revenue for reporting to Procera was created?

20                    ANSWER:  That is correct.

21                    QUESTION:  And do you know how Tektronix

22  would go about figuring out which sales involved DPC?

23                    ANSWER:  I do not.

24                    QUESTION:  Okay.  Let's look at the next

25  exhibit.  And this is going to be Exhibit 12.  It's a
```

1 document bearing the Bates stamp NetScout 015003. Let

2 me know when you have it in front of you.

3   ANSWER: I have it in front of me.

4   QUESTION: And do you recognize this

5 document?

6   ANSWER: I do.

7   QUESTION: What is it?

8   ANSWER: It's an exhibit I produced with

9 some financial information.

10   QUESTION: And this is the exhibit we've

11 been referring to throughout this deposition, correct?

12   ANSWER: I have refer --

13   MR. ATTORNEY: Objection, form.

14   ANSWER: I have referred to it, yes.

15   QUESTION: Let's go to the next exhibit.

16 This is going to be Exhibit 13. Do you recognize this

17 document?

18   ANSWER: Yes.

19   QUESTION: And is this the data we were

20 talking about a minute ago that covers a one-year time

21 period?

22   ANSWER: Yes.

23   QUESTION: And this, for the record, is

24 an exhibit that was produced natively so the PDF does

25 not have a Bates stamp but the Bates number is NetScout

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 1  247567.

 2                    And do you recognize this document?

 3                    ANSWER:  I do.

 4                    QUESTION:  And what is this?

 5                    ANSWER:  This is the raw sales force data

 6  used to support one of the two analyses I sent you, one

 7  of the two previous exhibits.

 8                    QUESTION:  Within all the revenue numbers

 9  that we're referring to with this exhibit and the two

10  prior, you did not include any sales other than sales in

11  the U.S., correct?

12                    ANSWER:  That is correct.

13                    QUESTION:  But there's also numbers

14  corresponding with total customer price, total floor

15  price, total list price, and list price, correct?

16                    ANSWER:  You're saying are there other

17  numbers in that row?  Yes.

18                    QUESTION:  Yes, there are other numbers

19  in those columns that I just named, correct?

20                    ANSWER:  Yes.

21                    QUESTION:  And sitting here today, you

22  can't tell me what those columns actually represent in

23  terms of the pricing, correct?

24                    ANSWER:  Not at a specific level, that's

25  correct.
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```
 1                    QUESTION:  And so how did you make the

 2  determination that you should be using the column that

 3  you actually used?

 4                    ANSWER:  After speaking with the

 5  commercial pricing team.

 6                    QUESTION:  And did you ask them why that

 7  number only corresponds with the big machine sales

 8  column?

 9                    ANSWER:  I did not.

10                    QUESTION:  If you would look at the --

11  the fourth column -- I mean, sorry, row.  And there,

12  looking at the customer final price column, which is the

13  one you testified you used, it says 187,740, correct?

14                    ANSWER:  Correct.

15                    QUESTION:  And then if you go to the

16  right, in the big machines sales price there, it says

17  93,870, correct?

18                    ANSWER:  Correct.

19                    QUESTION:  And so there the numbers are

20  different, correct?

21                    ANSWER:  They are different.

22                    QUESTION:  Did you exclude any data out

23  of these numbers?

24                    ANSWER:  Yes.

25                    QUESTION:  Okay.  So there are things
```

 1 that are in here that you did exclude based on looking

 2 within a particular quote, correct?

 3   ANSWER: Correct.

 4   QUESTION: And how did you decide what to

 5 exclude?

 6   ANSWER: By the part name, that field.

 7   QUESTION: And -- and what was your

 8 criteria?

 9   ANSWER: My criteria was if it was a

10 hardware component or the -- what I testified to before

11 was IPA, ITA, and ISA, I consider that essential --

12 essential software.

13   QUESTION: Okay. So -- so we've been

14 talking about the ones that are part numbers. What

15 about some of these others that say, for example, N-WTY?

16   Do you see that?

17   ANSWER: Yes.

18   QUESTION: Did you include those in your

19 numbers, your final numbers?

20   ANSWER: I did not.

21   QUESTION: And those correspond with

22 warranty and maintenance, correct?

23   ANSWER: The second and third rows do.

24 I -- there's a lot of part numbers, but those two do,

25 yes.

```
 1                    QUESTION:  And actually, if you look

 2   through this particular first page, all of the ones that

 3   start with N-WTY correspond with warranty and

 4   maintenance, correct?

 5                    ANSWER:  I'm going down through the first

 6   page.  Yes.

 7                    QUESTION:  And so the -- the price -- or

 8   strike that.

 9                    The revenue from those items you did not

10   include in your numbers, correct?

11                    ANSWER:  That is correct.

12                    QUESTION:  What about, for example, Part

13   No. 8, which belongs to the part family of services, is

14   that something you would have included?

15                    ANSWER:  I used the part name field.  I

16   would have to see what the manual -- Input Part No. 8

17   is, but I believe that would have been excluded.

18                    QUESTION:  Because that's services and

19   not hardware or software?

20                    ANSWER:  Correct.

21                    QUESTION:  So there would have been some

22   hardware or software that you would have excluded?

23                    ANSWER:  Yes.

24                    QUESTION:  Did you yourself undertake any

25   kind of analysis as to what capabilities or
```

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 1  functionalities of the G10, the GeoBlade, or the GeoSoft

 2  RAN are accused of infringement in this case?

 3                  ANSWER:  No.

 4                  QUESTION:  Okay.  How are price lists set

 5  up, then, at NetScout?

 6                  ANSWER:  The price lists are -- it's --

 7  it's essentially -- it's a list -- there are list

 8  prices, but you have to pull and pick and choose from

 9  the various options on the list to designate the

10  solution that the customer is buying.  It's not -- for

11  example, what there's not is a simple line that says

12  G10, and I want three of those.  It's not like that at

13  all.

14                  QUESTION:  Going back to pricing, when

15  you are -- you being NetScout or Tektronix, is creating

16  a price list for the accused technologies, how are

17  prices allocated between software and hardware?

18                  ANSWER:   On the list price?

19                  QUESTION:  Yes.

20                  ANSWER:  Can you re -- maybe clarify the

21  question?

22                  QUESTION:  What part is not clear to you?

23                  ANSWER:  When we're setting list pricing,

24  the question is how do we split a net price between

25  hardware and software?
```

1   QUESTION: Yes.

2   ANSWER: It's hard to answer that

3   question with a hundred percent granularity. In

4   general, we place a high degree of value on the

5   software.

6   QUESTION: And why is that?

7   ANSWER: Because it allows us to capture

8   more of the market value.

9   QUESTION: Why does it allow you to

10   capture more of the market value?

11   ANSWER: Because when -- in a software

12   development model like ours where it's -- that's the --

13   let's put it this way, it's the highest value out of

14   what we do. We dedicate an extraordinary amount of our

15   internal resources to software development. We spend

16   much more on software development than we do on the

17   hardware side, and it's more -- the specific value add

18   is on the software side.

19   QUESTION: Are the discounts applied to a

20   solution, for example, or is it a per component basis

21   discount?

22   ANSWER: It's per solution.

23   QUESTION: Why don't we turn to -- again,

24   to Exhibit 18, which then is NetScout native Excel

25   spreadsheet 251225, if you could, please.

1   And you have that in front of you?

2   ANSWER: I do.

3   QUESTION: And you said you created this

4   spreadsheet?

5   ANSWER: I did.

6   QUESTION: Okay. Can you maybe just give

7   a holistic overview of the information that is included

8   in this spreadsheet and -- and why you created it?

9   THE ATTORNEY: You can answer if you

10   understand.

11   ANSWER: This is an extension of what was

12   provided in a couple of earlier cases for -- it was

13   discussed in the last deposition. It was a slightly

14   expanded form of something that was already provided.

15   QUESTION: So just to confirm, this data

16   represents all sales information relating to U.S. and

17   non-U.S. sales of G10, GeoBlade, and GeoSoft; is that

18   correct?

19   ANSWER: I would characterize it that it

20   includes key information for all international sales for

21   a specific time period for those three products, yes.

22   QUESTION: Okay. And I guess if we jump

23   to the reference sub tab where, correct me if I'm wrong,

24   it looks like the various product names are

25   alphabetized. And I guess if we jump to Line 197 in the

```
 1  reference sub tab, Column A, 197 starts with "install,"

 2  and then there are several different installation

 3  products.  Do you see that?

 4              ANSWER:  Yes.

 5              QUESTION:  And so all the installation

 6  revenue or revenue from installation products are

 7  indicated as excluded; is that correct?

 8              ANSWER:  Yes.

 9              QUESTION:  Okay.  And it was your

10  decision to exclude those sorts of products?

11              ANSWER:  Yes.

12              QUESTION:  So is it your understanding

13  that any optional software would be excluded?

14              ANSWER:  Yes.

15              (Videoclip ends.)

16              THE COURT:  Does that complete this

17  witness by deposition?

18              MR. DAVIS:  It does, Your Honor.

19              THE COURT:  All right.  Ladies and

20  gentlemen of the jury, we're going to recess for the day

21  at this point in time.  I'm going to ask you to, as you

22  exit the courtroom, to leave your closed juror notebooks

23  on the table in the jury room.

24              I'm going to remind you again of my

25  earlier instructions not to discuss the case with
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1 anyone, including yourselves. Follow all the other

2 instructions I've given you.

3   I'd like to have you back tomorrow

4 morning ready to go by 8:30. So if you'll get here

5 about 8:15, 8:20, we'll try to start as close to 8:30 as

6 we can.

7   I wish each of you a good evening.

8 Travel safely to your homes, and we'll see you tomorrow

9 morning. The jury is excused at this time.

10   (Jury out.)

11   THE COURT: All right. Be seated,

12 please.

13   Counsel, for your information, according

14 to the Court's calculations, there's been a total of

15 seven hours and 13 minutes used during today's portion

16 of the trial. That's allocated by my calculations at

17 five hours and 26 minutes is used by Plaintiff and an

18 hour and 47 minutes is used by Defendant.

19   The Court will attempt to keep you

20 updated on a rolling basis as we go through the

21 remainder of the trial.

22   Also, I remind you before I bring the

23 jury in in the morning that I'll expect both sides to be

24 prepared to read into the record those items from the

25 list of pre-admitted exhibits that were used during

1 today's portion of the trial before the jury. And we'll

2 do that likewise on a rolling basis throughout the

3 remainder of the trial.

4   You'll also need to keep Mrs. Lockhart

5 happy with updates to the list of exhibits, and she'll

6 work with you on that.

7   Are there questions from either side

8 before we recess for the evening? Anything from

9 Plaintiff?

10   MR. DAVIS: No, Your Honor.

11   THE COURT: Anything from Defendant?

12   MR. KRAEUTLER: No, Your Honor.

13   THE COURT: We stand in recess until

14 tomorrow morning.

15   COURT SECURITY OFFICER: All rise.

16   (Recess.)

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5   CERTIFICATION

6

7   I HEREBY CERTIFY that the foregoing is a true

8   and correct transcript from the stenographic notes of

9   the proceedings in the above-entitled matter to the best

10 of my ability.

11

12

13 /s/Shelly Holmes _____   _10/10/17_____
    SHELLY HOLMES, CSR, TCRR   Date
14 OFFICIAL COURT REPORTER
    State of Texas No.: 7804
15 Expiration Date: 12/31/18

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